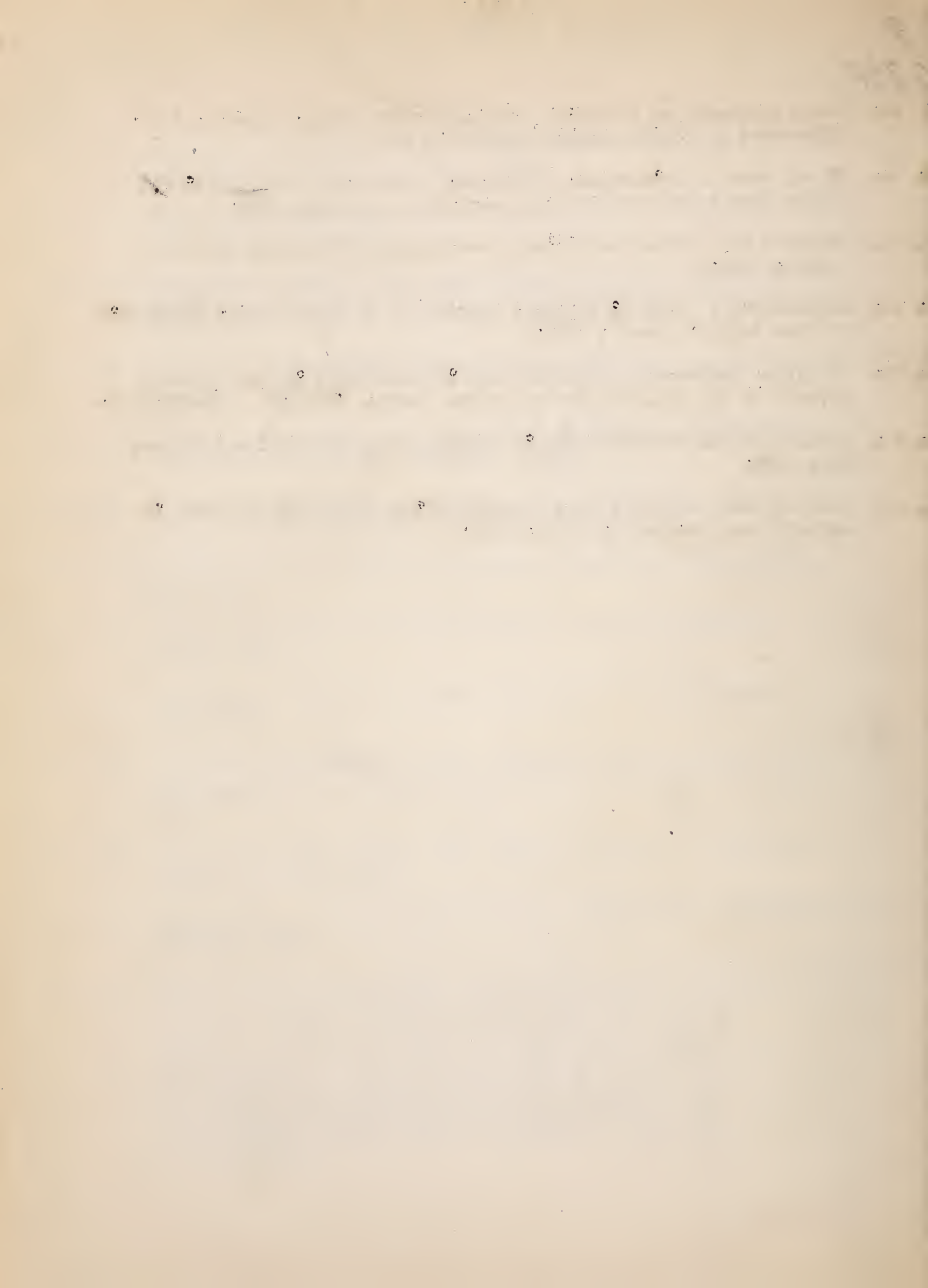
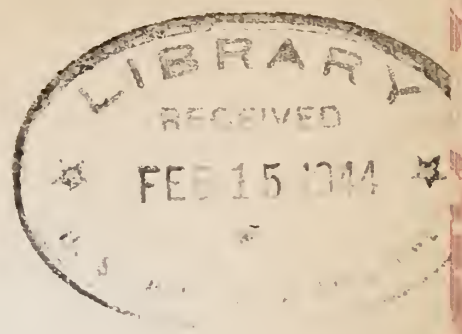


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UNITED STATES DEPARTMENT OF AGRICULTURE  
Bureau of Agricultural Economics

-0-

Agricultural Economics Bibliography No. 39

GREECE

A GUIDE TO OFFICIAL STATISTICS OF AGRICULTURE  
POPULATION AND FOOD SUPPLY

PART I. - AN ANNOTATED LIST OF OFFICIAL PUBLICATIONS

Compiled by A. M. Hannay  
Under the Direction of Mary G. Lacy, Librarian  
Bureau of Agricultural Economics

PART II. - METHODS OF COLLECTION AND ANALYSIS OF OFFICIAL STATISTICS

By J. D. Black and Constantin Ladas  
For the Bureau of International Research  
of Harvard University and Radcliffe College

Washington, D. C.  
October, 1932

CONTENTS

Foreword . . . . .	III-IV
Part I. An Annotated List of Official Publications. Compiled By A. M. Hannay . . . . .	1-17
Part II. Methods of Collection and Analysis of Official Statistics. By J. D. Black and Constantin Ladas . . . . .	18-127
Index . . . . .	128-142



## FOREWORD

The Library of the Bureau of Agricultural Economics has had a constant demand for the agricultural statistics of foreign countries. In order to supply a guide to these statistics the library undertook to index the sources of official foreign statistics. After several year's work it was decided to publish a guide for one country at a time rather than for a group of countries as had been planned.

At about this time Dr. J. D. Black of Harvard University had become interested in a somewhat similar project. In 1929 at the suggestion of Dr. Edward M. East of the Bussey Institution of Harvard University, the Bureau of International Research of Harvard University and Radcliffe College made a grant to Dr. Black to enable him to conduct a comparative study of the statistics of agriculture, population, and food supply of different countries. The aim of the study was to promote a more effective use of the statistics now available, and to lay the foundation for methods of collecting future statistics that would lend themselves better to international comparisons. A plan for combining the two undertakings and publishing the results in the Agricultural Economics Bibliography series of the Library of the Bureau of Agricultural Economics was approved by the two agencies. Greece was chosen as the second country to work upon following Switzerland because Mr. Constantin Ladas, formerly a resident of Macedonia, was available to handle the Greek literature pertaining to the subject, and because it was felt that the type of agricultural organization found in Greece would serve as one type that any international collection of agricultural statistics would have to provide for. Mr. Ladas had just completed five years of study at the Massachusetts State College majoring in agricultural economics and rural sociology.

### PART I

This is an annotated list of official publications of the Greek Government containing agricultural statistics which may be found in the library of the U. S. Department of Agriculture or in the Library of Congress. The kind of statistics to be found in each publication is indicated, e.g. statistics of population, land utilization, area, production, yield, consumption, import, export, and prices of agricultural products, index numbers and meteorological data. Forestry statistics have been included only when found in publications of a general character.

The use of a hyphen in an inclusive date period, as 1912-1917 means that the information is given for each separate year of the period. When an average figure for the inclusive period is meant a slanting line is used, as 1912/17.

The call numbers used in the two libraries have been given in the left-hand margin. They are preceded by the initials U.S.D.A. for the U. S. Department of Agriculture, and L.C. for the Library of Congress.

## PART II

In Part II the methods of collecting and analyzing the statistics of Greece are presented as far as possible from existing sources of information, and tables showing the more important data have been included both for the most recent and for earlier censuses. Changes in methods and definitions of units have been related to changes in the data. The data have been used as a basis for estimating the possible effects of differences in methods of collecting and analyzing the statistics, and for suggesting possible methods of reducing the existing data to a comparable basis and of collecting future statistics that will be comparable. In similar studies of other countries it is planned to make comparisons with the statistics of the United States, Switzerland, Greece, and still other countries. In each case, the results will be related to the methods employed by the country in collecting the data for the 1930 World Census of Agriculture.

Part II also contains a supplementary bibliography at the beginning of each section giving references to official sources of general population statistics; references to important secondary sources of information, statistical or otherwise; and references to discussions of methods of collecting and analyzing statistics.

In developing the procedure of Part II, the two authors have had the assistance of the members of the group of agricultural economists at Harvard University, more particularly of Miss Lois Bacon and Miss Martha S. Epps. Mr. Henry I. Richards and Dr. Murray R. Benedict also assisted considerably in developing the methodology in its earliest stages.

The report was finally read and supplemented rather extensively by Mr. A. A. Pallis, Secretary General of the Ministry of Public Health, Athens, Greece.



GREECE

A GUIDE TO OFFICIAL STATISTICS OF AGRICULTURE  
POPULATION AND FOOD SUPPLY

PART I. -- AN ANNOTATED LIST OF OFFICIAL PUBLICATIONS

Compiled by A. M. Hannay.

Under the Direction of Mary G. Lacy, Librarian  
Bureau of Agricultural Economics

- L.C.  
HF197  
.A58  
Greece. Genikē statistikē hypēresia.  
Bulletin semestriel du commerce spécial de la Grèce avec  
les pays étrangers.  
Athènes, 1917- Semi-annual.  
At head of title, 1917- : Ministère de l'économie  
nationale. Direction de la statistique.  
Greek and French; French title preceded by title in Greek.  
Statistics for "les nouvelles provinces de Macédoine,  
Épire, Crète et Iles de l'Archipel."  
Contains half-yearly statistics of import and export  
(quantity, value, country of origin and of destination).
- L.C.  
HF197  
.A6  
Greece. Genikē statistikē hypēresia.  
Bulletin trimestriel du commerce spécial de la Grèce avec  
les pays étrangers.  
Athènes,  
French title preceded by title in Greek.  
Text in Greek and French.  
L.C. has 1903-1916.  
Quarterly statistics of import and export (quantity,  
value, country of origin and of destination).
- L.C.  
HA1351  
.A2  
Greece. Genikē statistikē hypēresia  
Dénombrement des habitants des nouvelles provinces de la  
Grèce de 1913. Athènes, 1915.  
At head of title: Royaume de Grèce. Ministère de  
l'économie nationale. Direction de la statistique.  
French title preceded by title in Greek.  
L.C. has 1913.  
Not examined.

Greece. Genikē statistikē hypēresia.

See also

Greece. Hypourgeion ethnikēs oikonomias. Diethynsis statistikēs.

- L.C.  
HAL352  
1907  
Greece. Hypēresia apographēs.  
Résultats statistiques du recensement général de la population effective le 27 octobre 1907 par Dr. Georges Chomatianos, chef du Service du recensement. Athènes, Imprimerie nationale [etc.] 1909. 2 v.  
At head of title: Royaume de Grèce. Ministère de l'intérieur. Service du recensement.  
Added title-pages and introduction in Greek. Headings of tables in Greek and French.  
Tome 2 contains statistics of the agricultural population in 1907 by departments and provinces.
- U.S.D.A.  
268  
St2A  
Greece. Hypourgeion ethnikēs oikonomias. Diethynsis statistikēs.  
Annuaire statistique de la Grèce, année 1-1930-  
Athènes, [1931]-  
Greek and French.
- L.C.  
HAL351  
.A35  
Greece. Genikē statistikē hypōresia.  
Annuaire statistique de la Grèce...  
Vol. for 1930 contains statistics of 1. meteorology; 2. population; 3. agriculture; 4. commerce; 5. prices and index numbers; 6. consumption.
1. Meteorology.  
Annual statistics of barometric pressure (average), temperature (average, maximum, minimum), humidity (absolute, relative), evaporation, cloudiness, rainfall, snow, hail, fog, dew, frost, winds (direction, frequency), Athens, Salonika, Zante, Heraclion, Jannina, Tripoli, 1920-1928; earthquakes in Greece 1919-1926.
2. Population.  
Area and population of Greece yearly 1821-1929; population by departments, census of 1839, 1840, 1841, 1842, 1843, 1844, 1845, 1848, 1853, 1856, 1861, 1870, 1879, 1881, 1889, 1896, 1907, 1913, 1920, 1928; population of cities, 1853, 1856, 1861, 1870, 1879, 1881, 1889, 1896, 1907, 1913, 1920, 1928; population of cities of 10,000 inhabitants and over, 1928; average population of departments, provinces, municipalities, communes, districts, 1920-1928; rural and urban population (towns of over 5000 inhabitants; towns of from 2001 to 5000 inhabitants; villages), 1879, 1889, 1896, 1907, 1920, 1928; population by sex, 1861, 1870, 1879, 1889, 1896, 1907, 1920, 1928; rural and urban population by sex, 1879, 1889, 1896, 1907, 1920, 1928; population by age and sex, married or unmarried, 1861, 1870, 1879, 1907, 1920, 1928; according to degree of literacy, 1870, 1879, 1907, 1920, 1928; by profession, 1907, 1920, 1928; by place of birth, language, and religion, 1920,



1928; numbers of families, 1861, 1870, 1879, 1920; numbers of refugees (families, individuals) settled on farms up to July 31, 1929.

### 3. Agriculture.

Area cultivated by administrative divisions; area in grain, legumes, vegetables, industrial and aromatic plants, forage plants, vines, raisins; area, production, yield, value of wheat, barley, maslin, maize, oats, rye, legumes, vegetables, industrial and aromatic plants, forage plants, 1860, 1911-1928.

Production and value of olive oil, olives, must, tobacco, 1920-1928.

Annual statistics of import and export (quantity, value) of wheat, maize, barley, oats, other cereals, malt, fodder, flour, bran, beans, peas, lentils, rice, potatoes, starch, fruits (fresh, dried), vegetables, export of figs (dried), currants, raisins, tobacco (leaf), olive oil, wine, 1913, 1924-1928.

Quantity of raisins used in industry 1926/27, 1927/28, 1928/29.

Production and value of lemons, citrons, oranges, mandarins, apples, pears, figs (dried), chestnuts, almonds, walnuts, carob beans, acorns, 1914-1928.

Annual statistics of import and export (quantity, value) of apples, pears, plums, oranges, lemons, mandarins, citrons, grapes, peaches, apricots, figs (dried), fruit juices, dates, currants, raisins, walnuts, almonds, hazelnuts, pistachio nuts, carob beans, other fruits, 1913, 1925-1929; import of agricultural machinery, 1913, 1924-1929; import and export of chemical fertilizer, 1913, 1925-1929.

Amount of money expended for the settlement of refugees on farms: for livestock, houses, tools, loans, general expenses; landed property ceded or expropriated for settlement, up to Dec. 31, 1928.

Chambers of agriculture, 1929, date of establishment, receipts, expenses.

Numbers of oxen, cows, buffaloes, mares, horses, mules, asses, sheep, hogs, goats, 1860, 1899, 1911, 1914, 1916-1918, 1920-1928; poultry, rabbits, 1911, 1914, 1916-1918, 1920-1928.

Annual statistics of import and export (number, value) of oxen and bulls, cows, buffaloes, calves and heifers, sheep, lambs, goats, kids, hogs, horses, foals, mares, asses, mules, dogs, 1913, 1925-1929.

Numbers of livestock ceded to refugees up to December 31, 1928.

Production of fresh cocoons 1929; numbers of sericulturists, 1928; import and export of cocoons, silk worm eggs, raw silk, 1913, 1924-1929.



Area in forests, by varieties of trees, 1929; production and value of forest products, 1923-1928; statistics of import and export of forest products (quantity, value), 1914, 1925-1929; forest fires (number, area affected, damage done, cause of fire), 1928.

#### 4. Commerce.

Annual statistics of import and export of individual products (quantity, country of origin and of destination), 1927, 1928, 1929; by groups of commodities (quantity, value), 1926-1929.

#### 5. Prices and Index Numbers.

Average prices in 106 towns of bread, macaroni, beans, potatoes, beef, lamb, milk, butter, cheese, olive oil, coffee, sugar, rice, eggs, olives, wood, yearly, 1914, 1920-1929; monthly, 1929; average annual prices of above products in Athens, Piraeus, Salonika, Jannina, Cavalla, Larissa, Patras, 1914, 1920-1929.

Index numbers of prices of onions, pumpkins, green beans, egg-plants, beef, veal, mutton, lamb, fowls, ducks, geese, turkeys, milk, butter, cheese, fat, olive oil, brandy, wine, beer, coffee, sugar, rice, wood, barley, hay, straw, bran, eggs, olives, yearly, 1914-1929; monthly, 1929; index numbers of cost of living, bread, macaroni, beans, potatoes, beef, lamb, milk, butter, cheese, olive oil, coffee, sugar, rice, eggs, olives, yearly, 1914-1929; quarterly, 1929.

#### 6. Consumption.

Consumption of tobacco, 1926-1929; beer, 1924-1928.

U.S.D.A. Greece. Hypourgeion ethnikēs oikonomias. Dieuthynsis statistikēs.  
268 Bulletin mensuel du commerce spécial de la Grèce avec  
St2T les pays étrangers.  
Athènes, 18 - 1931.

L.C. Greek and French.  
HF197 1892-1916 issued by Hypourgeion tōn oikonomikōn. Statistikon  
.A5 grapheion.

19 -1916 have title: Bulletin trimestriel du commerce spécial de la Grèce avec les pays étrangers. (L.C. HF197.A6)

1917 has title: Bulletin semestriel du commerce spécial de la Grèce avec les pays étrangers... "Y compris les nouvelles provinces." (L.C. HF197.A58)

L.C. entry:

Greece. Genikē statistikē hypōresia.

Bulletin mensuel du commerce spécial de la Grèce avec les pays étrangers. Athènes, 18 -1931.

At head of title: Ministère des finances. Bureau de statistique.

Added t.-p. and cover-title in Greek.

Greek and French in parallel columns.

U. S.D.A. has Jan.-Oct., 1892; 1910-1917; 1919-1929.

L.C. has Jan.-July, 1877; 1888-1893; 1895; 1897-1898; 1920-1921; July-Sept., 1922; 1923; Jan., 1924; Jan.-June, 1931.

L.C. catalogues the Bulletin semestriel and the Bulletin trimestriel separately.

See under

Greece. Genikē statistikē hypōresia.

J.S.D.A. Greece. Hypourgeion ethnikēs oikonomias. Diouthynsis statistikēs.  
268 Population du royaume de Grèce d'après le recensement  
St2P du 19 décembre 1920.  
Athènes, 1921.

L.C. L.C. entry:  
HAL352 Greece. Genikē statistikē hypōresia.  
1920a Population du royaume de Grèce d'après le recensement du  
19 décembre 1920. Population de fait sanctionnée par le  
décret royal du 31 août 1921.  
Athènes, Imprimerie nationale, 1921. 464 p.  
At head of title: Royaume de Grèce. Ministère de  
l'économie nationale. Direction de la statistique.  
Statistics of population in December, 1920, by departments,  
provinces, municipalities, communes, towns and villages.

U.S.D.A. Greece. Hypourgeion ethnikēs oikonomias. Diouthynsis statistikēs.  
268 Recensement de la population de la Grèce au 19 décembre 1920-  
St2Rp 1 janvier 1921. Résultats statistiques généraux. A. Population.  
B. Familles.

L.C. Athènes, Imprimerie nationale, 1928. 432 p.  
HAL352 Greek and French.  
1921 L.C. entry:

Greece. Genikē statistikē hypōresia.

Recensement de la population de la Grèce au 19 décembre  
1920-1 janvier 1921. Résultats statistiques généraux...

Athènes, Imprimerie nationale, 1928. 432 p.

At head of title: République hellénique. Ministère de  
l'économie nationale. Statistique générale de la Grèce.

Greek and French.

French title preceded by title in Greek.

Contents. - A. Population. - B. Familles.

Statistics of actual and of floating population.

Actual population according to age, sex, language, religion,  
profession, etc.; numbers of unemployed, according to sex,  
profession, cause and duration of unemployment; numbers of  
blind and deaf mutes; numbers of foreigners. Census of  
population by families in various combinations; according  
to the profession of the head of the family.



U.S.D.A. Greece. Hypourgeion ethnikēs oikonomias. Diethynsis statistikēs.  
268 Recensement de la population du royaume de Grèce au 19  
St2Re décembre 1920-1 janvier 1921... [Résultats statistiques pour  
les divisions géographiques].

L.C. Athènes, Imprimerie nationale, 1923.

HA1352

1920

Greece. Genikē statistikē hypēresia.

Recensement de la population du Royaume de Grèce au  
19 décembre 1920-1 janvier 1921.

Athènes. Imprimerie nationale, 1923.

At head of title: Royaume de Grèce. Ministère de  
l'économie nationale. Direction de la statistique.

Greek and French.

French title preceded by title in Greek.

U.S.D.A. has I. Résultats statistiques pour la Grèce  
Centrale et Eubée. A. Population. B. Familles. 1927;

III. Résultats statistiques pour les Iles Ioniennes.

A. Population. B. Familles. 1924; IV. Résultats statistiques  
pour les Iles Cyclades. A. Population. B. Familles. 1923.

L.C. has III. Résultats statistiques pour les Iles Ioniennes.

A. Population. B. Familles. 1924; IV. Résultats statistiques  
pour les Iles Cyclades. A. Population. B. Familles. 1923.

Statistics of actual and of floating population. Actual  
population according to age, sex, language, religion, pro-  
fession, etc.; numbers of unemployed, according to sex, pro-  
fession, cause and duration of unemployment; numbers of blind  
and deaf mutes; numbers of foreigners. Census of population  
by families in various combinations; according to the pro-  
fession of the head of the family.

Greece. Hypourgeion ethnikēs oikonomias. Diethynsis statistikēs.

See also

Greece. Genikē statistikē hypēresia.

U.S.D.A. Greece. Hypourgeion ethnikes oikonomias. Genikē statistikē hypēresia.

268

St2B

Bulletin mensuel de statistique publié par la Statistique  
générale de la Grèce. Année 1- Jan. 1929-

Athènes, 1929-

L.C.

At head of title, 1929- : République hellénique.

IA

Greek and French.

1351

French title preceded by title in Greek.

.A3

U.S.D.A. has 1929.

L.C. has 1929.

1929 contains the following statistics:

Area and population of Greece, number of inhabitants per  
square kilometre, 1821, 1828, yearly 1839-1845, 1848, 1853,  
1856, 1861, 1870, 1879, 1889, 1896, 1907, 1920, 1928 (monthly).

Population according to the census of 1920, 1928, by  
departments (Jan.); actual and floating population, 1920,

1928, by departments, municipalities, and communes of 10,000 inhabitants and over (Feb.), 1928 only (March); population of cities, 1920, 1928 (May); actual population, 1839-1845, 1848, 1853, 1856, 1861, 1870, 1879, 1881, 1889, 1896, 1907, 1913, 1920, 1928, by departments (June); population of cities of 10,000 inhabitants and over, 1853, 1856, 1861, 1870, 1879, 1881, 1889, 1896, 1907, 1913, 1920, 1928 (July); population by profession, 1928 (August); population by sex and profession, 1928 (September); population of the municipalities of Athens and Piraeus in 1928, by sex and profession, including farmers in general, cultivators of grain, legumes and forage crops, cultivators of vegetables, cultivators of tobacco and cotton, cultivators of fruit trees, cultivators of olive trees, vineyardists, nursery men, superintendents, keepers, forestry workers, livestock breeders, apiarists, sericulturists (November); foreigners in Greece in 1928 (December); numbers of refugees (families and individuals) established on farms, 1928 (June).

Area and production of wheat, barley, maslin, maize, oats, rye, beans, peas, lentils, potatoes, tobacco, cotton, sesame, aniseed, hay, clover, must, grapes, currants, raisins, yearly 1923-1927; production of wheat, maslin, barley, oats, rye, maize, hay, clover, straw, must, tobacco, olive oil, olives, currants, raisins, 1928 (preliminary figures) (Jan.); production and value of lemons, citrons, oranges, mandarins, apples, pears, figs (dried), chestnuts, almonds, walnuts, carob beans, acorns, 1923-1927 (Feb.); numbers of oxen, cows, buffaloes, horses, mules, mares, asses, sheep, hogs, goats, poultry, rabbits, 1923-1927; contagious diseases among domestic animals in 1928 (Mar.); area of state forests; production and value of forest products, 1923-1927; forest products (State and privately owned forests), 1925-1927; numbers of forest fires, area affected, amount of damage, character of damage, cause of fire (State and privately owned forests), 1926-1927; State receipts from forests, 1923-1927; contagious diseases among domestic animals, 1928; monthly, 1929 (April); area, production, yield, value of wheat, barley, maslin, maize, oats, rye, beans, peas, lentils, potatoes, tobacco, cotton, sesame, aniseed, hay clover, must, grapes, currants, raisins, olive oil, olives in Crete, 1928; production and value of lemons, citrons, oranges, mandarins, apples, pears, figs (dried), chestnuts, almonds, walnuts, carob beans, acorns in Crete, 1928; numbers of oxen, cows, buffaloes, horses, mules, mares, asses, sheep, hogs, goats, poultry, rabbits, in Crete, 1928; numbers of livestock ceded to the refugees, Dec. 31, 1928; contagious diseases in domestic animals, 1928; monthly, 1929 (May); area cultivated in early wheat, barley, maslin, oats, rye, straw, 1929; quantity of seed used in the production of wheat



barley, maslin, oats, rye, straw, 1929; area and production of wheat, barley, maslin, oats, rye, straw, 1929, by departments; contagious diseases in domestic animals, 1928; monthly, 1929 (June); area, production, yield, value of wheat, barley, maslin, maize, oats, rye, beans, peas, lentils, potatoes, tobacco, cotton, sesame, aniseed, hay, clover, must, grapes, currants, raisins, olive oil, olives, 1928; production of lemons, citrons, oranges, mandarins, apples, pears, figs (dried), chestnuts, almonds, walnuts, carob beans, acorns, 1928; numbers of oxen, cows, buffaloes, horses, mules, mares, asses, sheep, hogs, goats, poultry, rabbits, 1928; contagious diseases in domestic animals, 1928; monthly, 1929; numbers of livestock slaughtered and quantity of meat produced in certain cities in April, 1929; calves, heifers, oxen, goats, sheep and lambs, hogs (July); area, production, value of wheat, barley, maslin, maize, oats, rye, beans, peas, lentils, potatoes, tobacco (leaf), cotton, sesame, aniseed, hay, clover, must, grapes, currants, raisins, olive oil, olives, in Macedonia, Epirus, Thrace, 1928; contagious diseases in domestic animals, 1928, monthly, 1929; numbers of livestock slaughtered and quantity of meat produced in certain cities in May, 1929: calves, heifers, oxen, goats, sheep, hogs (August); area, production, value of wheat, barley, maslin, maize, oats, rye, beans, peas, lentils, potatoes, tobacco, cotton, sesame, aniseed, hay, clover, must, grapes, currants, raisins, olive oil, olives in Central Greece and Euboea, Thessaly, Peloponnesus, Aegean Islands, Cyclades, Ionian Islands, 1928; contagious diseases in domestic animals, 1928; monthly, 1929; numbers of livestock slaughtered and quantity of meat produced in certain cities in June, 1929: cattle, sheep and goats, hogs (September); production of wheat, barley, oats, maslin, rye, hay, fodder, clover, straw, garlic, potatoes, 1929 (preliminary figures), by departments; contagious diseases in domestic animals, 1928; monthly, 1929; numbers of livestock slaughtered and quantity of meat produced in certain cities in July, 1929; cattle, sheep and goats, hogs (October); production of tobacco, must, maize, beans, peas, lentils, 1929 (preliminary figures), by departments; contagious diseases in domestic animals, 1928; monthly, 1929; numbers of livestock slaughtered and quantity of meat produced in certain cities in August, 1929: cattle, sheep and goats, hogs (November); contagious diseases in domestic animals, 1928; monthly, 1929; numbers of livestock slaughtered and quantity of meat produced in certain cities in September, 1929; cattle, sheep and goats, hogs (December).

Numbers of agricultural cooperatives, December 31, 1927 by regions and departments (Jan.); December 31, 1928 (April).

Landed property expropriated and requisitioned: area, number of cooperatives and of members settled on it (Feb.);



property ceded to the association for the settlement of refugees up to December 31, 1928.

Chambers of agriculture: date and place of establishment; date on which they began to function; not yet in operation; receipts and expenses, 1928 (April).

Expenditures for the settlement of refugees on farms from January 1, 1924, to December 31, 1928, for livestock, houses, tools, loans in kind (prêts en espèces), public works, general expenses (May).

Monthly statistics of barometric pressure, temperature (average, maximum, minimum), humidity (absolute, relative), evaporation at Athens, Salonika, Zante, 1928; also average annual statistics, 1920-1928; monthly statistics, 1928 and average annual statistics, 1920-1928: cloudiness, rainfall, snow, hail, fog, dew, frost, Athens, Salonika, Zante (July), Heraclion (Crete), Jannina, Tripoli (August); monthly statistics, 1928 and average annual statistics, 1920, 1928: frequency and direction of winds, Athens, Salonika (September), Heraclion, Tripoli (October); earthquakes, 1919-1926 (November).

Annual statistics of import and export (quantity, value) of agricultural products, 1927, 1928, Jan.-Nov. (Jan.); 1927, 1928, Jan.-Dec. (Feb.); monthly Jan.-Oct., 1928, 1929 (Mar.-Dec.)

Average prices of bread; macaroni, beans, potatoes, beef, lamb, milk, butter from sheep's milk, cheese, oil, wine, coffee, sugar, rice, eggs, olives, wood, Sept.-Dec., 1914, 1927, 1928 (Jan.-Apr.); Jan.-Aug., 1914, 1928, 1929 (May-Dec.); index numbers of prices of above products, 1914-1927 (Jan.-Mar.); 1914-1928 (Apr.-Dec.)

Index numbers of cost of living, yearly 1915-1927 (Jan.-Apr.); 1915-1928 (May-Dec.); monthly Jan., 1928-Oct. 1929 (Jan.-Dec.)

Tobacco manufacture, 1927: number of workers, average salary, amount paid in salaries, days of unemployment, numbers of unemployed receiving insurance money and amount received, 1927 (Jan.)

Tobacco consumption 1926-1928 (Feb.)

L.C. Greece. Hypourgeion ton esoterikon.  
 HA1352 Statistique de la Grèce. Population (dénombrement de 1870).  
 1870 Athènes, 1872.  
 At head of title: Ministère de l'intérieur.  
 L.C. card has title in Greek characters only.  
 Statistics of population in 1870 by departments, provinces, and communes. Comparison for communes with census of 1861. Population by houses and other buildings, by age and sex, by degree of literacy, by profession.

L.C. Greece. Hypourgeion ton esoterikon.  
 HA1352 Statistique de la Grèce. Population. Recensement général  
 1889 à la date 15-16 avril 1889. Athènes, Imprimerie et lithographie nationale, 1891.

At head of title 3. partie: Ministère de l'intérieur.  
Section d'économie et de statistique.

Added t.-p. in Greek.

Greek and French.

L.C. has 3. partie. Sujets hellènes à l'étranger.

Not examined.

L.C. Greece. Hypourgeion tōn esōterikōn.

IA1352

1870a

Statistique de la Grèce. Recensement de la population en 1870. Exposé sur les résultats du recensement. Athènes, Impr. Perris frères, 1874. 65 p.

Signed: Alexandre Manselias, chef de division, directeur du Bureau de statistique.

Statistics of actual and of floating population.

Statistics of population in 1870 by territorial and administrative divisions, by square kilometres, by families, by sex, by age, by profession, by language and religion.

L.C. Greece. Hypourgeion tōn oikonomikōn.

HF197

.A3

Commerce de la Grèce avec les pays étrangers.

Athènes, 1859-1906.

French title preceded by title in Greek.

Text in Greek and French.

L.C. has 1858, 1860-1874; 1887; 1891; 1896-1897; 1899; 1901-1904.

1858 has title: Tableau général du commerce de la Grèce pendant l'année 1858.

Continued by

Greece. Statistikon graphēion

Statistique du commerce spécial de la Grèce avec l'étranger.

Annual statistics of import and export (quantity, value, country of origin and of destination).

L.C. Greece. Hypourgeion tōn oikonomikōn.

HF197

.A4

Tableau du mouvement du commerce... par les principaux bureaux de douane de l'état.

Athènes, 18 - monthly.

French title preceded by title in Greek.

Greek and French in parallel columns.

1876 has title: Tableau du mouvement du commerce...

1876 par les principaux bureaux de douane de l'état, savoir: les bureaux d'Athènes, de Pirée, de Patras, de Syra, de Corfou, de Céphalonie, de Zante, de Spetzia, de Naupli (ou Napoli de Romanie), de Santorin, de S<sup>te</sup> Maure, de Calamata, de Chalcis, d'Hydra et de Galaxidi.

L.C. has 1876.

Monthly statistics of import and export (quantity, value, country of origin and of destination).



U.S.D.A. Greece. Hypourgeion tōn oikonomikōn. Statistikon graphēion.  
268 Bulletin statistique des prix moyens des principaux  
St2Bu articles alimentaires e.t.c., 1912, 1. sem.; 1913-  
Athènes, 1912-

L.C. Added title in Greek.  
(not cat. Text in Greek and French.  
Nov.17,1931) U.S.D.A. has 3. trim., 1919; 1921-1929.  
L.C. has 1928.

Average monthly prices of wheat, rye, barley, maize, oats, meal (various qualities), wheat bread, dried beans, dried peas, potatoes, tomatoes, onions, pumpkins, beans, egg-plant, beef, veal, mutton, lamb, pork, goat's meat, fowl, chickens, ducks, geese, turkeys, butter, olive oil, wine, beer, eggs, milk, cheese, olives, coffee, sugar, rice, wood, tobacco (leaf), hay, straw, wool (raw and washed), cotton (ginned and unginned), silk cocoons; issued quarterly. Comparative figures for corresponding months of 3 preceding years ( -1923, 1.q.). Annual index numbers for 6-8 preceding years (1914-100) ( -1923, 1.q.); monthly and quarterly index numbers 1923, 1.q.

Average monthly prices of meal, flour, macaroni, wheat, bread, beans (dried, fresh), peas, potatoes, tomatoes, onions, pumpkins, egg-plant, beef, veal, mutton, lamb, pork, goat's meat, fowls, chickens, ducks, geese, turkeys, milk, butter (from cow's milk, sheep's milk), cheese, fat, olive oil, brandy, wine, beer, coffee, sugar, rice, wood, barley, hay, straw, bran, eggs, olives, issued quarterly (1923, 2.q.- ). Figures for Jan.-June, 1923 in second quarter, 1923. Annual index numbers for 8-10 preceding years (1914-100); monthly and quarterly index numbers (1923, 2.q.- ).

Average monthly prices of wheat, rye, barley, maize, oats, meal (various qualities), flour (various qualities), wheat bread (A,B,C, quality), dried beans, dried peas, potatoes, tomatoes, onions, pumpkins, beans, egg-plant, beef, veal, mutton, lamb, pork, goat's meat, fowls, chickens, ducks, geese, turkeys, milk, butter (from cow's milk, from sheep's milk), olive oil, wine, beer, eggs, milk, cheese, olives, coffee, sugar, rice, wood, tobacco (leaves), hay, straw, wool (raw, washed), cotton (ginned, unginned), silk cocoons in 101 towns ( -1923, 1.q.)

Average monthly prices of meal, flour, wheat bread (A,B,C, quality), beans (dried, fresh), peas, potatoes, tomatoes, onions, pumpkins, egg-plant, beef, veal, mutton, lamb, pork, goat's meat, fowls, chickens, ducks, geese, turkeys, milk, butter (from cow's milk, from sheep's or goat's milk), cheese, fat, olive oil, brandy, wine, beer, coffee, sugar, rice, wood, barley, hay, straw, bran, eggs, in 106 towns (1923, 2.q.- ).

U.S.D.A. Greece. Hypourgeion tōn oikonomikōn. Statistikon grapheion.  
238 Recensement agricole de 1911.  
St2R Athènes, Imprimerie nationale, 1914.  
L.C. entry:

L. C. Greece. Hypourgeion ethnikēs oikonomias.  
HD1961 Recensement agricole de 1911.  
.A4 Athènes, Imprimerie nationale, 1914.

At head of title: Royaume de Grèce. Ministère de l'économie nationale. Direction de la statistique.

French title preceded by title in Greek.

Contents: A. Superficie, rendement agricole et valeur du rendement.

B. Effectif du bétail, des oiseaux de basse-cour et des ruches.

C. Dénombrement des arbres fruitiers et d'autres arbres de la Grèce.

U.S.D.A. has A-C

L.C. has A I-II, IV-V. B II-IV.

A.

Contains statistics of area, production, yield, and value of crops in I. Thessaly and Arta; II. Ionian Islands; III. Cyclades; IV. Central Greece and Euboea; V. Peloponnesus.

Statistics of area, production, yield, and value of wheat, barley, maize, oats, rye, beans, peas, lentils, vetch, potatoes, beets, onions, garlic, artichokes, tobacco, cotton, hemp for hashish, rice, hay, clover, vines, currants, raisins, olive oil, olives, by provinces and departments; area of wheat, barley, maize, oats, rye, beans, peas, lentils, vetch, lupine, taros, potatoes, tomatoes, beets, onions, garlic, leeks, artichokes, cucurbitaceous plants, tobacco, cotton, sesame, aniseed, flax, hemp for hashish, rice, hay, clover, pasturage, fallow land, orchards, gardens, meadows, vines, currants, raisins, olive trees, fig trees, woods and forests, unproductive land, marshes, by departments, provinces, communes, and districts.

B.

Contains livestock statistics in I. Thessaly and Arta; II. Ionian Islands; III. Cyclades; IV. Central Greece and Euboea; V. Peloponnesus.

Numbers of horses, male, female, less than 3 years old, 3 years old and over; mules; asses; cattle, male and female, less than a year old; bulls, oxen, cows, a year old and over; buffaloes; camels; sheep less than a year old, a year old and over; hogs, domestic, foreign; goats, male, female; fowls; turkeys; geese; ducks; guinea fowls; pigeons; rabbits; bee-hives, by departments, provinces, communes, and districts.



C.

Numbers of lemon trees, citron trees, orange trees, mandarin trees, Seville orange trees, shaddock or grape fruit trees, pear trees, apple trees, peach trees, apricot trees, cherry trees, plum trees, quince trees, fig trees, olive trees, mulberry trees, chestnut trees, walnut trees, almond trees, carob trees, by departments, provinces, communes, and districts.

- U.S.D.A. Greece. Hypourgeion tōn oikonomikōn. Statistikon grapheion.  
268 Statistique annuelle du rendement agricole et effectif du  
St2S bétail, des oiseaux de basse-cour et des ruches de la Grèce,  
1914-1928.  
Athènes, 1916-1929.  
1915 has title: Statistique annuelle du rendement agricole  
des nouvelles provinces de la Grèce.  
Added title in Greek. Text in Greek and French.  
1921-1925 have title: Statistique annuelle du rendement  
agricole de la Grèce.  
1926-1928 have title: Statistique annuelle agricole de  
la Grèce.

L.C. entries:

- L. C. Greece. Hypourgeion ethnikēs oikonomias.  
S233 Statistique annuelle du rendement agricole des nouvelles  
.A38 provinces de la Grèce, 1914-1915.  
Athènes, 1916-1917.  
At head of title: Royaume de Grèce. Ministère de  
l'économie nationale. Direction de la statistique.  
Greek and French.  
French title preceded by title in Greek.  
1914 has title: Statistique annuelle du rendement agricole  
et effectif du bétail, des oiseaux de basse-cour et des ruches  
des nouvelles provinces de la Grèce.  
1915 does not include statistics for Macedonia.

- L. C. Greece. Hypourgeion ethnikēs oikonomias.  
S233 Statistique annuelle du rendement agricole et effectif du  
.A4 bétail, des oiseaux de basse-cour et des ruches de la Grèce.  
At head of title, 1916-1921, Royaume de Grèce. Ministère  
de l'économie national. Direction de la statistique; 1922-1928,  
République hellénique. Ministère de l'économie nationale.  
Statistique générale de la Grèce.

U.S.D.A. has 1914-1918, 1920-1928.

L.C. has 1914-1916, 1918-1928.

Vols. for 1914-1915 contain only statistics of Macedonia  
(1914), Epirus, Aegean Islands, and Crete.

Statistics of area, production, yield, and value of wheat,  
barley, maslin, maize, oats, rye, millet, sorghum, broom corn,  
beans, peas, lentils, lupine, tares, vetch, potatoes, onions,  
garlic, artichokes, beets, tomatoes, cucurbitaceous plants,



tobacco, cotton, sesame, aniseed, flax, hemp, (in 1914 only, red pepper, opium, poppy seed, saffron), rice, hay, clover, grapes, must, raisins, currants, by provinces, departments, and sub-divisions of departments, 1914; by provinces and departments, 1915.

Statistics of production, yield, and value of olive oil and olives by provinces, departments, and sub-divisions of departments, 1914; by provinces and departments, 1915.

Statistics of production of honey, by provinces, 1914; by provinces and departments, 1915.

Statistics of production and value of fruits (lemons, oranges, mandarins, citrons, pears, apples, almonds, walnuts, chestnuts, hazelnuts, acorns, carob beans), by provinces, departments, and sub-divisions of departments, 1914; by provinces and departments, 1915.

Numbers of horses, mules, asses, oxen, buffaloes, camels, sheep, hogs, goats, chickens, turkeys, geese, ducks, rabbits, beehives, by provinces, departments, and sub-divisions of departments, 1914.

Vol. for 1916 contains statistics for A. Ancient Greece; B. The New Provinces with the exception of Macedonia (Epirus, Aegean Islands, Crete).

Both sections contain statistics of area, production, yield, and value of wheat, barley, maslin, maize, oats, rye, straw for brooms, beans, peas, lentils, vetch, lupine, tares, potatoes, onions, garlic, cucurbitaceous plants, tobacco, cotton, sesame, aniseed, flax, hay, clover, grapes, must, raisins, currants, by departments and districts; production and value of olive oil, olives, honey, beeswax, lemons, mandarins, citrons, pears, apples, almonds, figs, walnuts, chestnuts, hazelnuts, acorns, carob beans, by departments and districts.

Numbers of oxen, buffaloes, horses, mares, mules, cows, asses, sheep, hogs, goats, poultry, beehives, by departments and districts.

Vols. for 1917-1918 contain statistics for whole country of area, production, yield, and value of wheat, barley, maslin, maize, oats, rye, beans, peas, lentils, vetch, lupine, tares, potatoes, onions, garlic, cucurbitaceous plants, tobacco, cotton, sesame, aniseed, flax, hay, clover, must, grapes, currants, raisins; production and value of honey, beeswax, olive oil, olives, lemons, oranges, mandarins, citrons, pears, apples, figs, almonds, walnuts, chestnuts, acorns, carob beans, hazelnuts; numbers of oxen, buffaloes, horses, mules, cows, asses, mares, sheep, hogs, goats, poultry, rabbits, beehives. 1918 has comparative figures for 1917 for production and value of honey and numbers of livestock.

Vol. for 1919 contains statistics of area (1914-1919) of wheat, barley, maslin, maize, oats, rye, beans, peas, potatoes, tobacco, must, currants, by departments; area, production, yield, and value of wheat, barley, maslin, maize, oats, rye, beans, peas, potatoes; tobacco, cotton, forage plants, must, grapes, currants, raisins, olive oil, olives, lemons, citrons, oranges, mandarins, apples, pears, figs, chestnuts, walnuts, almonds, carob beans, acorns.

Vol. for 1920-1925 contain statistics of area of wheat, barley, maslin, maize, oats, rye, beans, peas, potatoes, tobacco, must, currants (comparative figures for 5 to 7 preceding years), by departments; area, production, yield, and value of wheat, barley, maslin, maize, oats, rye, beans, peas, lentils, potatoes, tobacco, cotton, sesame, aniseed, hay, clover, must, grapes, currants, raisins, olive oil, olives, lemons, citrons, oranges, mandarins, apples, pears, figs, chestnuts, almonds, walnuts, carob beans, acorns, by departments.

Numbers of oxen, cows, buffaloes, horses, mules, mares, asses, sheep, hogs, goats, poultry, rabbits, by departments.

Vols. for 1926-1928 contain statistics of area, production, yield, and value of wheat, barley, maslin, maize, oats, rye, beans, peas, lentils, potatoes, tobacco, cotton, sesame, aniseed, hay, clover, must, grapes, currants, raisins, olive oil, olives, by departments; area of wheat, barley, maslin, maize, oats, rye, beans, peas, lentils, potatoes, tobacco, cotton, sesame, aniseed, hay, clover, must, grapes, currants, raisins, by provinces and departments (comparative figures for 7 preceding years); production and value of olive oil, olives, raisins and currants, tobacco, must, by provinces and departments (comparative figures for 7 preceding years); production and value of lemons, citrons, oranges, mandarins, apples, pears, figs, chestnuts, almonds, walnuts, carob beans, acorns, by provinces and departments (comparative figures for whole country for 4 preceding years).

Numbers of oxen, cows, buffaloes, horses, mules, mares, asses, sheep, hogs, goats, poultry, rabbits, by provinces and departments (comparative figures for whole country for 4 preceding years).

U.S.D.A. Greece. Hypourgeion tōn oikonomikōn. Statistikon graphoion.

268 Statistique du commerce spécial de la Grèce avec  
St2 l'étranger.

Athènes,

French title preceded by title in Greek, French and Greek.

Publiée par le Bureau de statistique du Ministère des finances.



1914-1916, 1919-1920 issued in 2 vol.: [v.1] Statistique du commerce spécial de la Vieille Grèce avec les pays étrangers. [v.2] Statistique du commerce spécial des nouvelles provinces de la Grèce avec les pays étrangers.

1919 issued by the Diouthynsis Statistikēs.

1919, 1923-25, 1928 have minor changes in title.

1923-25 in 1 vol.; 1928- in 2 vol.

L. C.  
HF197  
.A3

L. C. entries:

Greece. Statistikon grapheion.

Statistique du commerce spécial de la Grèce avec l'étranger

1905-

Athènes, 1907-

French title preceded by title in Greek.

French and Greek.

Publiée par le Bureau de statistique du Ministère des finances

1905-1907 contain also "Mouvement de la navigation."

Continuation of Commerce de la Grèce avec les pays étrangers.

U.S.D.A. has 1908-1911; v.1 of 1915-1916; 1917-1925; 1928.

L. C. has 1905-1915; 1917-1925; 1928.

L. C. entry for 1914 [v.2]:

L. C.  
HF3571  
.A3

Greece. Diouthynsis ermesōn phorōn kai monopōliōn.

Statistique du commerce spécial des nouveaux provinces de

la Grèce avec les pays étrangers pendant l'année 1914

Athènes, Imprimerie nationale, 1916-

At head of title: Ministère des finances. Direction des contributions indirectes. Section de statistique.

Greek and French.

French title preceded by title in Greek,

"Des nouvelles provinces de Macédoine, Epire, Crète, et Iles de l'Archipel."

L. C. has 1914.

Contains annual statistics of import and export of agricultural products (quantity, value, country of origin and of destination). Statistics of transit trade in 1928.

U.S.D.A.  
268  
St2St

Greece. Hypourgeion ton oikonomikōn. Statistikon grapheion.

Statistique du commerce extérieur de l'île de Crète.

La Canée,

L. C. entry:

L. C.  
HF198  
.C7A3

Greece. Statistikon grapheion.

Statistique du commerce extérieur de l'île de Crète pendant l'année

La Canée,

French title preceded by title in Greek.

Greek and French.

U.S.D.A. has 1912. Also typewritten statement and translation of import and export trade 1919-20.

L. C. has 1909-1912.

Annual statistics of import and export (quantity, value,  
country of origin and of destination).

Greece. Statistikon grapheion

See

Greece. Hypourgeion tōn oikonomikōn. Statistikon grapheion.





GREECE

A GUIDE TO OFFICIAL STATISTICS OF AGRICULTURE  
POPULATION AND FOOD SUPPLY

PART II. - METHODS OF COLLECTION AND ANALYSIS OF OFFICIAL STATISTICS

By J. D. Black and Constantin Ladas  
For the Bureau of International Research  
of Harvard University and Radcliffe College

Assisted by  
Lois Bacon and Martha S. Epps  
Research Assistants and by A. A. Pallis  
Secretary General of the Ministry of Public Health  
Athens, Greece

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A. Statistical Organization of Greece

The center of the statistical organization of Greece is the General Statistical Service, established in the Ministry of National Economy. In the collection of data, this service works through (1) the administrative divisions of the country, that is, the departments and provinces, and (2) the statistical offices established in the various ministries of the state. Its publications relating to agriculture may be classified under the following headings:

1. State of the Population

Publications concerning the enumeration of the population; censuses of 1920 and 1928; register of municipalities and communes, etc.

2. Vital Statistics

Vital statistics for the years 1921-1927.  
Causes of deaths for the years 1921-1927.

3. Agriculture

Agricultural census of 1911; agricultural production of Old Greece 1911, 1914, and 1915; Statistique Agricole de la Grèce, 1919-1928.

4. Industries

Census of industrial enterprises, etc.

5. Prices

Bulletin Statistique des Prix Moyens des Principaux Articles Alimentaires.

## 6. Commerce

### Annual publications:

Statistique du Commerce de la Grèce, etc.

### Monthly publications:

Bulletin Mensuel du Commerce Spécial de la Grèce avec les Pays Étrangers.

### Other publications.

## 7. Other Publications

Bulletin Mensuel de Statistique, 1929-1931.

Annuaire Statistique de la Grèce, 1930.

The only official statistics available are the federal statistics. The various administrative units take an active part in the collection of data, but they neither tabulate nor publish the results.

In order to avoid mistakes in the identification of the areas mentioned in the statistical publications of Greece, a few words are necessary regarding the administrative divisions of the country, which have undergone frequent changes, particularly during the last eighteen years.

Until 1887 Greece was divided, for administrative purposes, into prefectures (nomoi) and subprefectures (eparchiai). In 1887 the latter were eliminated as administrative units, although they continued to exist as simple geographical divisions for certain purposes, e.g., as electoral or revenue-districts.

In 1912, after the annexation of Macedonia, Epirus, the Aegean Islands, and Crete, four administrative divisions\* were created, one for each of these territories. Each administrative division\* was subdivided into prefectures, and each prefecture into a number of subprefectures (hypodioikiseis). The number of administrative divisions\* was increased in 1917 Macedonia being split up into 3 (Salonica, Eastern and Western Macedonia), and the Aegean Islands also into 3 (Lesbos, Chios, Samos). In 1920 a new administrative division\* that of Thrace, was added. In 1922, however, Macedonia again became a single administrative division\* and Lesbos, Chios, and Samos were reduced to the status of prefectures.

In the census of 1920 (see section D), the classification is by administrative divisions;\* prefectures, and subprefectures for New Greece, and by large geographical divisions (e.g., Peloponnese, Thessaly, etc.), prefectures, and "eparchies" for Old Greece. In the census of 1928, however,

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\*governorate-general. For use of term "administrative divisions" see The Statesman's Year-Book, 1932, p. 975.



(see section D), it was no longer possible to maintain the classification by administrative divisions\* for New Greece, because the boundaries of the administrative divisions\* were no longer coterminous with those of the geographical territories of the same name, part of Eastern Macedonia (the prefectures of Drama and Cavalla) having been included in the administrative division\* of Thrace. In official publications, the names "Macedonia" and "Thrace" are used to indicate the corresponding geographical areas and not the administrative units of that name, unless special mention is made to the contrary.

The French translation of the Greek terms "nomos" and "eparchia," adopted in the publications of the Greek Statistical Office, is respectively "département" and "province." In order to avoid confusion and make identification easy, the writer has adopted the same terminology. However, the use of the word "province" to indicate a subdivision of a "département" is incorrect, as, strictly speaking, the province should be the larger unit of the two.

The change in the topographical nomenclature used in official Greek publications which occurred between the censuses of 1920 and 1928 is as follows: In the census of 1920 the place names in the provinces annexed during 1912-19 (Macedonia, Thrace, etc.) are, with few exceptions, the same as those that were in use under the Turkish régime and which are given in contemporary maps. After 1922 such of these names as were of foreign origin (Turkish or Slav) were changed and Greek names substituted. In the census of 1928 the old name is placed in brackets after the new name for purposes of identification; e.g., the village of Baltza in the subprefecture of Salonica appears in the 1928 census as Melissochori (Baltza). The Ministry of the Interior published in January 1929 in book form a complete list of the old place-names and the corresponding new ones.

## B. Natural Bases of Agriculture

Sources listed in Part I are *Annuaire Statistique de la Grèce* and *Bulletin Mensuel de Statistique*.

The important other sources of information are as follows:

- M. Dorijas - *The Foreign Trade of Greece*.
- D. Aeginites - *The Climate of Greece*. Athens, 1908.
- M. J. Maravelakis - *Geophysical Investigations in Macedonia*,  
(Published in Greek at Salonica, 1926).
- Cyril G. Hopkins - *How Greece can Produce More Food*.  
Illinois Agricultural Experiment Station,  
Bulletin 239, 1922.

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\*governorate-general.





The Encyclopedia published in Greek by Eleutheroudeki's (Athens, 1929), under "Hellas."

There are a few books in English dealing with Greek agriculture, topography and climate, but these are unofficial and not always very dependable (mostly books of travel, description, etc.)

#### Topographical Features and Climate of Greece

Continental Greece is composed of a series of small valleys and plains shut off by mountains which make communication between different parts of the country extremely difficult. This division into natural areas is largely accountable for the highly individualized character of the inhabitants of each separate region - a fact which has had a noticeable influence on both the ancient and modern history of the country.

A large part of the land consists of barren mountains and swamps. Although no detailed topographical survey of the whole country has yet been carried out, the agricultural census of 1929, which ascertained roughly the cultivable area on the basis of the returns made by the cultivators themselves, showed that only 2,618,328 hectares are cultivated or capable of cultivation. This area represents about 20 percent of the total area of Greece, estimated by the Cartographical Service of the Greek Ministry of War at 130,199 square kilometers (13,019,900 hectares).

The fact that Greece has a very long and indented seacoast, with numerous excellent harbors, is another feature which has had an important bearing on the political and economic development of the country. Communication with the outer world was easier than with some of the more inaccessible parts of the interior. Furthermore, communication between the various parts of the country has always been carried on by sea rather than by land. Of the 35 departments into which Greece is divided, 28 have direct communication with the sea. It is still easier to go from Patras or Messolonghi to Athens by sea than by land. Most of the produce is transported from one part of the country to the other by sea, owing to the lack of good roads which make overland transport excessively costly.

Southern Greece, by which we mean the part of the country to the south of Thessaly, has very few rivers, and these of no great importance, as they cannot be used for navigation, nor are their waters employed to any appreciable extent for purposes of irrigation. On the other hand, a characteristic of this part of the country, especially of the Peloponnese, is the large number of torrents, the beds of which are mostly dry in summer. In winter and spring, however, these torrents are apt to be a cause of great devastation because, during the violent rain storms which are of frequent occurrence, the waters sweep down from the mountains to the sea, rolling down masses of boulders which are deposited on the cultivable land along the coasts. Those who have travelled along the northern



coast of the Peloponnese are familiar with these wide torrent beds which spread out over an immense area, and are responsible for the destruction of many thousands of acres of good land.

In Northern Greece, especially Thessaly, Macedonia, and Thrace, there are a number of rivers - the Peneius, Haliacmon, Axios (Vardar), Struma, Nestos, and Evros (Maritza). None of these, however, are navigable, nor are their waters used to any extent for irrigation. They too, owing to the lack of proper flood protection, are a source of mischief rather than of benefit, as they are subject to frequent floods. An appreciable percentage of each year's winter crops in the regions in question is lost, owing to inundations caused by these rivers. These are also responsible, due to lack of proper drainage and the silting-up of their estuaries, for the formation of vast expanses of marsh, which, besides rendering unproductive large tracts of land, also become breeding places for the mosquito, and are thus one of the principal causes of the prevalence of malaria which is the scourge of the Greek countryside and exercises so debilitating an effect on the health of the Greek peasant.

The climate of Southern Greece, including the Ionian and Aegean Islands and Crete, is the so-called Mediterranean climate.\* The rainfall (except in the island of Corfu which has the heaviest rainfall in Greece) is comparatively light.\*\* Periods of drought are frequent, and rain when it falls is torrential, doing much damage to crops.

The climate of Northern Greece is Continental, resembling that of Southeastern Europe, with extremes of heat and cold. Central Macedonia and Thessaly are, further, specially subject to violent winds [known as the vardaris (north) and livas (southwest)], which, in spring and early summer, are most destructive to crops.

The denudation of the mountains, due to forest fires and indiscriminate felling in the past, has led to a great deal of soil-erosion, the unprotected soil being swept away by the torrential rains. Actually only from 8 to 10 percent of the total area of the country is forest land, and of this only about half represents forests of tall or medium-sized trees, the rest of the forest area being low scrub and thickets (see The Public Forests of Greece, Ministry of Agriculture, Athens, 1929, p. 141).

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\* M. Dorijas states that there are three fairly distinct regional variations in the Greek climate:

1. The Mediterranean climate found mostly in the maritime districts, Peloponnese, and islands.
2. The Continental climate, found in Thessaly, Epirus, and Northern Macedonia.
3. The Alpine climate (sometimes called Central European climate), found in the higher mountain ranges, (Pindus, Arcadian plateau, etc.

\*\* Mean rainfall Corfu (greatest) - 53.34 inches; Attica (smallest) - 16.1 inches.



The literature with regard to the topography, geology, soil, climate, rainfall, and natural vegetation of Greece is very unsatisfactory. Because of the fact that Greece, since it became an independent State in 1830, has been expanding territorially, no official studies have been made embracing the whole of the new territories acquired throughout this period of expansion. The existing literature on geographic factors consists mostly of unofficial books, the contents of which cannot be regarded as entirely reliable, especially when used for statistical purposes.

The only official publications on meteorology (rainfall, climate, drought, etc.) are those issued monthly by the Athens Observatory. The tabulated figures for the period 1920-28 were published in the Bulletin Mensuel de Statistique of 1929 (vol. 1-6), and those for 1929 in 1930.

The Ministry of Agriculture has recently established in different parts of the country hygrometric or rainfall stations in connection with model farms on which have been settled young refugees who are graduates of agricultural schools. These young men will become in a few years the owners of these farms, and at the same time the regional recorders of the rainfall of Greece.

The Air Ministry (created in 1929) has also recently established a number of stations which take meteorological observations eight times a day. These data, although not published, are available on demand.

The Climate of Greece, by Professor Aeginites, director of the Athens Observatory, and other meteorological literature written by him, give reliable information on weather conditions in Greece, including precipitation, moisture and drought conditions.

Dr. Maravelakis, formerly director of the Geological Service of the Refugees Settlement Commission in Macedonia, has published certain meteorological and geological data concerning that province in his book Geophysical Investigations in Macedonia. This book also reproduces statistics and observations concerning the same region from Kublbrodt's *Klimatologie und Meteorologie von Mazedonien; Ein Beitrag zur Klimakunde der Balkanhalbinsel*, Hamburg 1920; and from C. G. Mariolopoulos's *Étude sur le Climat de la Grèce. Précipitation. Stabilité du Climat depuis les Temps Historiques*, Paris, 1925.

The geographic features of Greece are also discussed in a general way in *Foreign Trade of Greece* by Dorijas. This book lays special emphasis upon the physical characteristics of the country and their effect on production.

Statistical information dealing exclusively with geological factors or natural vegetation is not available. The most reliable and scientific study of the soils of Greece is that carried out in 1919 by C. G. Hopkins of the Agricultural Experiment Station of the University of Illinois, and published as *Illinois Agricultural Experiment Station Bulletin No. 239* (1922). This bulletin gives:



1. The composition of the Greek soil.
2. The natural supply of potassium and limestone.
3. Artificial methods for enrichment of the soil.

The Bureau of Statistics reports that there are no available topographical or soil maps of Greece.

### C. Definition of Agriculture

Sources listed in Part I are Recensement Agricole de 1911, and the various numbers of the Statistique Annuelle du Rendement Agricole.

Another important source is The Public Forests of Greece (in Greek). Ministry of Agriculture, 1929.

Two agricultural censuses have been taken in Greece, one in 1911 (for Old Greece only)\* and one in 1929 for the whole of Greece. In addition, the population census of 1920 includes some information on agriculture in its occupational classification which makes a distinction between agriculture and stock raising.

The agricultural census of 1911 was simply an enumeration of the agricultural wealth of the country, classified under three main heads:

1. Area in crops, together with an estimate of amount and value of yield.
2. Livestock of all sorts.
3. Fruit and other (cultivated) trees.

This census did not attempt to classify either the persons engaged in the various branches of agriculture, or the farms themselves.

The population census of 1920, in the classification of occupations related to agriculture, uses the term agriculture to include only enterprises or occupations that deal with the cultivation of lands for the production of cereals, legumes, forage plants, industrial crops, vegetables, and vines, and with the exploitation of forests, timberlands, and such small enterprises as lumbering, grass and resin gathering.

Stock raising is another main category and includes all enterprises connected with animal industry, such as the keeping of herds of sheep or goats, livestock raising in general, agriculture, poultry raising, and sericulture. This census includes hunting in the same category with stock raising, but under a separate subhead.

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\* For territories included in "Old Greece" and "New Greece" see Section E.



In the agricultural census of 1929, fishing occupies the third category in the classification, coming after agriculture and stock raising. Fishing is sometimes regarded as a branch of agriculture and summarized in tables together with other agricultural enterprises, but it is also treated separately in other parts of the same census. When fishing is carried on together with farming, it is usually classified as an auxiliary enterprise.

This census makes a clearer distinction between agriculture and stock raising. Agriculture includes all farm enterprises that have to do with the exploitation of land. Under stock raising it includes all owners or raisers of livestock who do not own land for purposes of purely agricultural exploitation (cultivation of crops, etc.). Owners of livestock who, at the same time, cultivate a piece of land, whether as owners or tenants, are classified under agriculture as cultivators (see section D, Number of Farms). This probably results in some duplication under these two heads, but the writer is unable to state how much.

It should be pointed out that this distinction between the two classes of owners of livestock corresponds to a real division which is very marked between the two classes. In Greece, the professional stock raisers are, for the most part, nomads called "Vlachs" or "Sarrakatsans," according to their racial origin. These nomads, who own vast flocks of sheep and goats (more rarely horses and other large animals), do not as a rule own land, but rent pasture either from the communes or from private individuals. In the summer they migrate with their flocks to the uplands, descending again during the autumn into the plains. This migration is known as "transhumance," and exists throughout the Balkans and also in Italy. St. George's Day (May 6) and St. Demetrius' Day (November 8) have been consecrated, by centuries of tradition, as the respective dates on which these two migrations from and to the plains start. The relations between nomads and cultivators are not as a rule very friendly, as the wandering flocks do a great deal of damage to the peasants' crops, which, in Greece, are not enclosed, there being no hedges or fences. In fact, the relation of the Vlachs to the peasants in Greece is very similar to that of the Bedawin to the fellahin in Egypt. According to a recent inquiry, the nomads number 10,151 families.

Lately there has been a considerable restriction of the area available for winter pastures. Before the arrival of the refugees, the owners of "chifliks" (large estates), who rarely cultivated more than a part of their land, used to let the uncultivated portion as pasture to the nomads. As the result of the expropriation of the chifliks and the settlement of the refugees, most of this pasture land has now been brought under cultivation. The consequence is that the nomad shepherds find it increasingly difficult to obtain the necessary pastures for the winter season. With the general increase of cultivation, nomadic sheep breeding must gradually disappear.

Apart from these nomads, the people engaged in professional stock raising in Greece are not very numerous.



On the other hand, the peasantry and other land owners also own considerable quantities of sheep and goats which are pastured on the village commons and fallow land. This practice is increasing and is becoming an important auxiliary source of income. Since, however, in their case stock breeding is subsidiary to their main occupation of agriculture (crop production), such persons are classed as cultivators (farmers).

The 1929 agricultural census does not include in its schedule "woods and forests," as was recommended for the world census of agriculture. A separate study of forests has already been made in Greece. This divides all forest land into public and private land. Details concerning the public forests have been published by the Ministry of Agriculture.

#### D. Number of Farms

The only source is listed in Part I, Recensement de la Grèce 1920. Statistique Generale de la Grèce.

A short description of farms and farming in Greece will be helpful as a background to the following analysis of statistical data.

Farms in Greece may be divided into the following broad groups:

1. Farms producing mainly cereals.
2. Farms producing mainly industrial crops (tobacco, raisins, oil).
3. Farms producing mixed crops.

Greece is not on the whole a wheat-growing country, for she has to import more than half of her annual requirements. There are only one or two regions which are predominantly wheat-growing, the Thessalian plain, Boeotia, the districts of Ptolemais (Cailaria) and Cozani in western Macedonia, and the easternmost portion of Thrace. The districts in question supply part of the requirements of the rest of the country. The farms in these regions also produce a little tobacco, but this is a crop of secondary importance.

To the second group belong the farms along the north and northwest coast of the Peloponnese, which are mainly devoted to the cultivation of currants, sultanas and other varieties of vine crops; those in certain districts of eastern Macedonia (Drama, Cavalla) and Western Thrace (Xanthi, Comotini), where the land is almost exclusively devoted to the production of high-class tobacco; and the majority of the farms in the Ionian Islands (Corfu, Cefallonia, etc.), Crete and Lesbos (Mytilene), which are mainly devoted to the production of oil. Tobacco, currants, wine and oil are the chief export crops, tobacco being principally exported to the United States and Germany, currants to Great Britain, wine to France, and oil to Italy where it is refined and from which it is re-exported.



The third group includes the great majority of the farms in the rest of the country. These cultivate mixed crops of cereals, tobacco, legumes, vines and olives. In northern Greece (Macedonia and Thrace) practically every farmer grows some tobacco. In the South, on the other hand, the place of tobacco is taken by vines and olives, although some tobacco is also grown in Argolis, Aetolia, and certain other districts of central Greece.

Farms belonging to peasant cultivators rarely exceed 100 stremmas (25 acres). In Macedonia, where a large part of the peasant population is composed of refugees recently settled there by the Refugee Settlement Commission, the average holding per family of 4 to 5 members is 35 stremmas (about 9 acres), which is barely sufficient to enable them to earn a livelihood.

The farms, unlike those in England and France, are not in one piece, but consist of a number of scattered plots of land. In Macedonia, for instance, a holding is rarely composed of less than five separate lots of land. The peasants, in a typical agricultural community, do not live on their land as in England, but cluster together to form a village or hamlet. A peasant's land may often be as much as half an hour's or an hour's distance away from his house. In malarial regions the village is often built on high ground overlooking the cultivable land, which is down in the hollow or plain. This land around the village is divided into a number of zones, according to the quality of the land. One zone, the lowest-lying, is reserved for the cultivation of maize, which forms the staple article of food of the agricultural population in northern Greece, another zone or two for the cultivation of wheat, another, on sloping ground, for vines, and so on. Each peasant has his strip in each zone.

There are no enclosures of any sort, the boundaries of each plot being, as a rule, indicated merely by stones, ditches, or a low belt of brambles. The lack of enclosures is responsible for an enormous amount of damage done to crops by stray animals. The wandering flocks of the nomads or the villagers' own animals are continually trespassing on the crops. Each village has to pay one or more watchmen, whose business it is to go round and guard the crops, arrest stray animals, and so on.

Most villages possess a common, called "meras" on which the village cattle are pastured in charge of the village neatherd. If a village has more fallow or pasture land than it needs for its own requirements, it leases the extra area to the nomads, the revenue going to the communal chest. The villagers also have the right of cutting firewood for their strictly domestic needs in the communal woods, called "coury".

Theoretically, there are three official sources containing information on the number of farms in Greece: the agricultural censuses of 1911 and 1929, and the census of population of 1920. Of the two agricultural censuses, the one taken in 1911 did not make a study of farm enterprises apart from the inquiry to determine the total acreage of all the farms in the country.



The results of the agricultural census of 1929 have not yet been published. It is expected that the method of tabulating the data will make it possible to determine the number of farms in Greece. In reality, the only source of information at present concerning the number of farms in the country is that based on the returns in the population census of 1920. In this case, the number of people who recorded themselves as engaged in agriculture (crop production) must be regarded as providing the only basis for estimating the number of farms, though the result reached can only be approximate, as out of a total of 789,481 reporting agriculture (crop production) as their principal occupation, nearly half did not report whether or not they were landowners, tenants or agricultural laborers. The tabulation of the returns of the agricultural census of 1929 will doubtless furnish an approximate basis for comparison with the data furnished by the returns of the population census.

No definition of a farm is given in any of the censuses mentioned above. In fact, there is no equivalent in Greek corresponding to the word "farm," as used in American terminology. The holdings vary from 1 to 10 hectares, with an average of about 3 1/2 hectares. Large estates or even medium-sized farms which were common twenty years ago, especially in northern Greece (Macedonia, Thessaly and Epirus), are rarely found today, owing to the operation of the expropriation laws, which have made it possible for the State to expropriate the land of all landowners possessing more than 300 stremmas (30 hectares or 75 acres).

The schedule of the agricultural census of 1929 defines a "cultivator" (kalliergitis) as a person cultivating land in person, whether he be an owner, tenant or farm laborer (i. e., landowners not cultivating their land in person are not included). The status remains the same whether he does or does not own livestock used either for home consumption or as part of his farm enterprise. A "stock raiser" is one that does not possess land for purposes of agricultural production, but is simply an owner or "raiser" of livestock. The professional stock raisers in Greece, as already mentioned, are mostly nomads owning flocks of sheep and goats. These are the persons indicated in the census as "stock raisers proper." This census, as appears from the schedule used, did not fix a minimum size of holding as constituting a farm enterprise. All holdings of land were to be included in the enumeration, irrespective of their acreage, type of farming and location. This corresponds closely to the practice of the International Institute of Agriculture.

From the technological classification of occupations, given in the population census of 1920, the various types of farms may be distinguished as follows:

- A. Agriculture and related enterprises.
  1. Diversified farm enterprises: where two or more types of farming are carried on.
  2. Farms on which cereals, legumes and forage plants are cultivated.
  3. Gardening: general truck farming.



4. Farm enterprises dealing with the production of tobacco and other industrial crops.
5. Orchards: general fruit growing, including olives and figs.
6. Wine and currant culture: farms specializing in vine production.
7. Horticulture.
8. Forestry enterprises: including lumbering and grass and resin gathering.

B. Livestock industry.

9. Livestock raising: including all enterprises concerned with the raising and breeding of livestock.
10. Apiculture.
11. Sericulture.

The typical farm enterprises in Greece correspond closely to diversified types of farms in the United States. The above classification of types of farm enterprises in Greece should not be interpreted literally to mean farms specializing exclusively in the types of farming in question. Poultry raising, for instance, which is indicated as a separate enterprise in the population census of 1920, is not a principal enterprise in Greece, but is usually a subsidiary to other types of farm operations.

E. Population of Greece: Occupations

Sources listed in Part I are: Dénombrement des Habitants des Nouvelles Provinces de la Grèce de 1913; Résultats Statistiques du Recensement de la Population de la Grèce, 1907; Recensement de la Population de la Grèce, 1920; Dénombrement des Habitants des Nouvelles Provinces de la Grèce, 1920; Bulletin Mensuel de Statistique (census of 1928); and several volumes entitled Statistique de la Grèce. Population.

The official censuses of the population of Greece, which go back as far as 1828, are the best statistics available on the subject. The censuses of the population in Greece, as in other countries, have been taken at irregular intervals.

The first census was taken in 1828, immediately after the country had been liberated from Turkey, but before it was formally set up as a State. The population according to this census was 753,400. In the same year a retrospective estimate was made of the population as it was in 1821, the year when the insurrection against Turkey broke out. According to this estimate, the population in 1821 was 938,765. Thus, during the seven years the insurrection lasted, there had been a decrease in the population of some 185,000. It took the country almost twenty-four years (until 1845) to make up the losses sustained during the insurrectionary period. In 1838 a new census was taken, and this was repeated yearly thereafter until 1845. The statistics of these censuses were never published. Publication began in 1846 and has been continued ever since.



After 1845 censuses were taken at short intervals, in 1848, 1853, 1856 and 1861. After 1861 the censuses were taken at longer intervals as follows: May 1870, April 1879, April 16 (old calendar) 1889, October 6, (old calendar) 1896, October 27, (old calendar) 1907, December 19, (old calendar) 1920\* and May 15, (new calendar) 1928.

In 1881 when Thessaly and a part of Epirus were annexed to Greece, a local census was taken to determine the population of the new provinces. A similar census was taken in 1913 in the territories annexed after the Balkan Wars (Macedonia, Epirus, Crete and the Aegean Islands). The census of 1920 was taken when Greece was in possession of the territories of Eastern Thrace, the Karagatch enclave (in Western Thrace), and the islands of Imbros and Tenedos, of which she was subsequently deprived in 1923. The last census, that of 1928, includes the territory of Western Thrace which was annexed by Greece after the World War, but, of course, does not embrace the territories lost in 1923.

For the censuses of 1836 to 1856, no definite period of time was set within which the enumeration should be completed. In many cases the enumeration lasted for many months, and in many parts of the country it was even repeated. The period of time for the census of 1861 was restricted to two months. The census of 1870 limited the period to fifteen days, and the census of 1879 to seven days. From the census of 1889 on, all enumerations were completed within a single day.

In all the censuses the instructions for making the enumeration were sent from the Central Statistical Office at Athens (attached first to the Ministry of the Interior and subsequently to that of National Economy) to the préfets or civil governors of departments, and through them to the sous-préfets, mayors and heads of communes. From 1836 to 1856 the censuses were taken by citizens, assisted by police officers and priests. From 1861 to the present time the censuses have been almost invariably taken by officially organized local committees consisting of the mayor (or head of the commune), the priest, the school-master, and local police officers. The enumerators gather the information by canvassing the houses in the assigned districts. Previous to 1920 there were no regular census districts for the different enumerators. The census of 1920 divided each city, town, or commune into "census sections," each covering from 20 to 30 families, or from 100 to 150 people. Two enumerators were assigned to each census section. These distributed the forms the day before the census and returned on the following day to collect them.

The census data for the years 1836-1856 were reported in "census books," distributed by the Statistical Office, in which there were listed the names of all the inhabitants of the city, town, village, etc. The same method was followed during the census of 1861, with the difference that the census books were supplemented by blanks and census tables for the statistical results.

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\* December 19, 1920 (old calendar) corresponds to January 1, 1921 (new calendar).



In the census of 1879 a new experiment was tried in the enumeration of the population of Athens. Instead of the census books, the Statistical Office made use, for the first time, of the "family report" which had been in use in Paris since 1836. In the census of 1889 the use of the family report was generalized. This procedure involves having the families themselves fill in the names of their members together with the names of persons working or boarding in the same house.

The census of 1896 was marked by a considerable improvement in the method of collecting the information. The family reports were replaced by individual cards. This new procedure was also adopted in the censuses of 1907 and 1920. The census of 1920 used both the individual card (for each member of the family and person living in the household), and the family record. The latter was made in the form of an envelope in which were inserted the individual cards of all members of the family and those of other persons living in groups, such as in hotels, prisons, hospitals, etc. In these family records, considerable space was provided for information concerning the members of the family and their relation to the head of the family.

There is no information available concerning the schedules of the censuses taken from 1836 to 1856 inclusive. The schedules of the censuses of 1861 and following included the item of occupation. The census of 1920 asked for occupation in detail, as follows:

- a. If agriculture was the main occupation, the person was asked to state his social status, i.e. owner, tenant, farm laborer.
- b. If engaged in industry and commerce, he was asked whether he was a manager, clerk, workman, apprentice, etc.
- c. If unemployed, reasons for it and period of unemployment.

The tabulation of the data of the various censuses has been made in two different ways. Until 1879 the tabulation of the census data was decentralized; the census books, after being sorted by the enumerators, were returned to the mayor's office where the returns for the commune were drawn up. These tables, compiled according to samples supplied by the Statistical Office, were sent to the headquarters of the province to which the municipality or commune belonged. Each provincial office made out its own returns based upon the communal returns and submitted them to the préfet of the corresponding department. There the provincial returns were tabulated, and on the basis of these tabulations the national tables were made out. Since the census of 1879, however, the tabulation of census returns has been centralized. Under this system, the returns are no longer tabulated in the communes and provinces but sent directly to the Central Statistical Office, which classifies them according to the various administrative divisions of the country. The latter method has eliminated many errors and irregularities which occurred under the decentralized system of tabulation.



Greece is composed to-day of the following territories, which, however, are geographical and not administrative units:

Old Greece  
(includes the territories annexed between 1821 and 1912)

1. Central Greece and Euboea
2. Peloponnese
3. Ionian Islands
4. Cyclades Islands
5. Thessaly and Arta

New Greece  
(includes the territories annexed since 1913)

6. Macedonia
7. Epirus
8. Crete
9. Aegean Islands
10. Western Thrace

The administrative division of the country at the time of the census of 1920 was as follows:

1. Old Greece - into departments (nomoi) and municipalities or communes.
2. New Greece - into administrative divisions at the head of which is a governor-general,\* departments, subprefectures and municipalities or communes.

(The lowest unit, if the population was 10,000 or over, was called a municipality, if below 10,000, a commune).

There were, at that date, in all 9 administrative divisions,\* 37 departments and 4797 municipalities or communes. The 37 departments were divided into 162 subdistricts which, in Old Greece, were called "eparchies" (provinces)\*\* and were territorial, not administrative units, while in New Greece they were called "hypodioikeseis" (subprefectures) and were administrative units under a sous-préfet.

The census of 1920 gives the population by (1) geographical territories (Old Greece) and administrative divisions\* (New Greece), (2) departments (or prefectures), (3) provinces (or subprefectures) and (4) municipalities and communes.

The census of 1928 follows the same division. At the time of this census there were 4 administrative divisions,\* 35 departments, 141 provinces and 5043 municipalities and communes. The complete statistical results of this census have not yet been published, the only figures available for the moment being those showing the geographical distribution of the population.

The census of 1920 makes a distinction between "de facto" (actual) and "de jure" population. The actual, or "de facto" population consists of the total number of persons actually present in the commune at the date of the census. This population consists of: First, citizens of the

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\*Governorates-general

\*\*French nomenclature; see Section A.



commune or municipality; second, persons from other communes or municipalities; and third, foreigners, including tourists, immigrants, etc. The "de jure" population consists of those persons who have their legal domicile in a definite part of the country and are registered in the municipal books, whether they are present or absent at the date of the census. The "de jure" population is made up: First, of persons present in their legal place of domicile on the day of the census; second, of persons absent from their legal domicile but resident in Greece; and third, of citizens of the commune resident in foreign countries. At various times, efforts have been made to enumerate the Greek population in foreign countries. The investigations have been conducted by the consuls.

The census of 1920 made a study of the increase of population. It did not, however, establish (except inferentially) the "physiological increase" (accroissement physiologique), which comes from the excess of births over deaths, as opposed to the "real increase" (accroissement de fait), which represents the differences in population as shown by different censuses. The increase in population from 1907 to 1920 (2,631,952 to 5,536,375) was due in considerable part to the annexation of new territories. The average annual increase per 1000, after eliminating the increase due to annexations, was worked out on the basis of the following formula:

$$1000_2 = 2302.5851 \frac{\log P - \log P_0}{T - T_0}$$

where P and P<sub>0</sub> indicate the population at the times T and T<sub>0</sub>. This corresponds to an annual increase of 6.15 per 1000 for the period between the two censuses 1907-1920 as opposed to 7.07 per 1000 for the previous period 1896-1907. This drop is intelligible, since the last 8 years of the period 1907-1920 were disturbed by war and other abnormal events (blockade of 1916, deportation of the population of East Macedonia to Bulgaria, epidemic of influenza in 1917, etc.). For practical purposes, however, the ratio of 6.15 per 1000 must be taken as representing the physiological increase for this period.

The previous censuses had not made an exhaustive study of occupations. This is especially true as applied to persons employed in gainful occupations. The census of 1907 did not fix an age limit in designating the number of gainfully employed persons. In the census of 1920 the questionnaire concerning agriculture called for the number of landowners, tenants, farm laborers and members of the family working on the father's estate. As there is no legal age limit for persons employed in agricultural enterprises, the census of 1920 included in the class of gainfully employed people all persons above ten years of age.

The ten vocational categories, which include all occupations in Greece, are shown in the order of their importance as follows: (a) agriculture, (b) public and private administration and liberal professions, (c) commerce, (d) industrial utilization of agricultural products, (e) stock-raising and hunting, (f) public utility services, (g) metallurgical

industries, (h) textile industries, (i) fishing, and (j) chemical industries. (Table I gives the figures). The census makes a distinction between main and auxiliary occupations. (See Tables I and II). The former is the business from which the main income is derived. The latter designates the performance of occasional work for short periods of time during the year, when a person is not occupied in his principal enterprise. (Women employed in housework are classed as having no occupation. However, in the agricultural sections of the country where most of the women work on the farms, many of these are returned as "cultivators").

The census of 1920 makes a detailed technological analysis of the occupations, based upon the classification mentioned above. The first part of this classification, which is related to agriculture and its allied industries, is shown as follows:

Technological table of occupations

Number	Serial:Classi- number:fication: : number	Titles of divisions	Analysis of titles
		I. <u>Categories</u>	
1	1	Agriculture	Agriculture proper, forests.
2	2	Stock raising and hunting	Stock raising, sericulture, hunting.
3		Industry, etc.	
-			
-			
-			
		II. <u>Classes</u>	
12	1-1	Agriculture proper	Farmers (with no other indication); cultivators of cereals, dry legumes and forage plants, vegetables, tobacco, fruit trees, industrial and aromatic products, vines; florists, laborers, estate agents and watchmen.
13	1-2	Forests	Foresters; wooders, lumbermen, grass-and-resin gatherers.



Technological table of occupations (continued)

Serial number	Classification number	Titles of divisions	Analysis of titles
14	2 - 1	Animal raising	Stock raising (with no other indication); raisers of cows, oxen, sheep, goats and hogs; shepherds; raisers of horses, mules, donkeys, dogs, etc., raisers of poultry, turkeys, ducks, rabbits, pigeons, bees, sericulturists.
15	-	Hunting	
		<u>III. Subclasses</u>	
62	1-1-1	Agriculturists (with no other indication)	-
63	1-1-2	Cultivators of cereals, dry legumes and forage plants	-
64	1-1-3	Cultivators of vegetables: tobacco, fruit trees, industrial and aromatic products	-
65	1-1-4	Cultivators of vines	-
66	1-1-5	Horticulturists	-
67	1-1-6	Estate agents and watchmen	-
68	1-2-1	Foresters	-
69	1-2-2	Grass gatherers	-
70	1-2-3	Lumbermen	-
71	1-2-4	Resin gatherers	-
72	2-1-1	Farmers employed in stock raising (with no other indication)	-

Technological table of occupations (continued)

Number	Classification	Titles of divisions	Analysis of titles
73	2-1-2	Raisers of cows, oxen, sheep, goats, hogs; shepherds	-
74	2-1-3	Raisers of horses, mules, donkeys, dogs, etc.	-
75	2-1-4	Raisers of poultry, turkeys, ducks, rabbits, pigeons, etc.	-
76	2-1-5	Raisers of bees	-
77	2-1-6	Sericulturists	-
78	2-2-1	Hunters	-

In the first grouping in the above table are included all occupations related to agriculture, and in the second, occupations related to the stock-raising industry and hunting. As explained above, only owners of livestock and their assistants, who were not owners of land, are enumerated under the second head. Each of these categories is divided into classes designated by numbers. Each of the classes is, in turn, indicated by a number shown after the corresponding category. Subclasses are also designated in a similar way and marked by three numbers, that of the category, of the class, and of the subclass. For example, the number 2-4-1, indicating people occupied in the dairy industry in general, signifies that this occupation is in the first subclass of the fourth class of the second category. There are figures available for each of these categories, classes and subclasses. (See Table III for figures on agriculture).

There is no separate classification given in the census of 1920 with regard to gainfully employed persons. In fact, there is no Greek technical term corresponding to "gainful employment." Figures concerning gainfully employed persons can, however, be derived from the other classifications that are given in the census. But such figures cannot be regarded as entirely reliable, because the number of persons who have not declared their occupations may include a certain number of gainfully employed. The best statistics concerning occupations will be found in Table 10, page LXXXVIII. These indicate the number of persons ten years of age and above according to sex and class of occupation. (See Table IV following). Two classifications are made with respect to agricultural enterprises. Under "agriculture" are included the wood and timber industry



Table I. POPULATION ABOVE 10 YEARS OF AGE ACCORDING  
TO SEX AND OCCUPATION \*

No.	Main occupation	Total population		
		Both sexes	Males	Females
1	Agriculture	794,110	695,147	98,963
2	Stock raising and hunting	120,394	110,749	9,645
3	Fishing	11,810	11,643	167
4	Extractive industries, metallurgy, building industries	78,829	76,282	2,547
5	Industries of products of agri- culture, stock raising, hunting and fishing			
a	Industry concerned with lumber and other forestry products	30,612	28,923	1,689
b	Industry concerned with cereals and fruits	32,543	30,359	2,184
c	Industry concerned with raisins, olive oil, wine and tobacco	27,340	20,940	6,400
d	Industry concerned with products of animals	49,712	48,192	1,520
e	Industry concerned with paper and other products coming from agri- culture, fishing, hunting and stock raising	2,375	1,410	965
	Grand Total:	142,582	129,824	12,758
6	Textile industries	66,129	23,235	42,894
7	Chemical industries	5,981	5,433	548
8	Industries and public utility services	86,870	84,686	2,184
9	Commerce	150,884	146,830	4,054
10	Public and private administration, professions, and arts	163,969	117,328	46,661

\*Recensement de la Population de la Grèce, 1920, p.82-85.

Table I. POPULATION ABOVE 10 YEARS OF AGE ACCORDING TO SEX AND OCCUPATION \* (Continued)

No.	Main occupation	Total population		
		Both sexes	Males	Females
11	Without occupation (students, women (engaged in house- hold duties, prisoners, beggars	2,050,767	399,251	1,651,516
12	Occupation not stated	245,685	122,248	123,437
	Grand Total:	3,918,010	1,922,656	1,995,354
	Secondary occupation			
1	Agriculture	23,378	21,577	1,801
2	Stock raising and hunting	15,049	14,336	713
3	Other industries	-	-	-
	Total of those who stated a second occupation:	104,152	99,000	5,152
	Total of those who did not state a second occupation:	3,813,858	1,823,656	1,990,202
		3,918,010	1,922,656	1,995,356

\*Recensement de la Population de la Grèce, 1920, p. 82-85.



Table II. COMPARISON OF MAIN AND SECONDARY OCCUPATIONS OF THE POPULATION OF GREECE IN 1920.\*

Category of main profession			Percentage engaged in a secondary occupation			
	Males	Females	Total		Agriculture animal husbandry, fishing and hunting	
			Males	Females	Males	Females
A. Agriculture	695,147	98,963	9.11	3.93	2.91	2.12
B. Stock raising and hunting	110,749	9,645	4.28	1.77	3.66	1.60
C. Fishing	11,643	167			1.81	0.60

Category of main profession	Percentage engaged in a secondary occupation					
	Industry		Commerce		Other branches	
	Males	Females	Males	Females	Males	Females
A. Agriculture	5.05	1.69	0.91	0.06	0.24	0.06
B. Stock raising and hunting	0.36	0.16	0.22	-	0.04	0.01
C. Fishing						

\*Recensement de la Population de la Grèce, 1920, p. on

Table III. ACTUAL POPULATION ABOVE 10 YEARS OF AGE ACCORDING TO SEX AND OCCUPATION\*

Number	Serial	Classification	Main occupation	Total for Greece
				Both sexes
				Males
				Females
			<b>A. AGRICULTURE</b>	
			<b>a. Agriculture (crop production)</b>	
1	1	-1 -1	Farmers (without other indication)	751035:662349: 88686
2	1	-1 -2	Cultivators of cereals, legumes and forage plants	1243: 1104: 139
3	1	-1 -3	Gardeners, cultivators of tobacco, fruit trees, industrial and aromatic products	30921: 21182: 9739
4	1	-1 -4	Cultivators of vines	2971: 2795: 176
5	1	-1 -5	Horticulturists	233: 222: 11
6	1	-1 -6	Farm employees and watchmen	3078: 3050: 28
			Total	789481:690702: 98779
			<b>b. Forests</b>	
7	1	-2 -1	Foresters	470: 457: 13
8	1	-2 -2	Grass and other herb gatherers	76: 62: 14
9	1	-2 -3	Lumbermen	3824: 3673: 151
10	1	-2 -4	Rosin gatherers	259: 253: 6
			Total	4629: 4445: 184
			Total of agriculture	794110:695147: 98963
			<b>B. STOCK RAISING AND HUNTING</b>	
			<b>a. Stock raising</b>	
11	2	-1 -1	Stock raisers	7416: 6627: 789
12	2	-1 -2	Raisers of cows, beef, goats, sheep, hogs; shepherds	110561:101992: 8569
13	2	-1 -3	Raisers of horses, mules, donkeys, dogs, etc.	352: 337: 15
14	2	-1 -4	Raisers of chickens, ducks, turkeys, rabbits, pigeons, etc.	55: 41: 14
15	2	-1 -5	Bee-keepers	545: 411: 134
16	2	-1 -6	Sericulturists	962: 842: 120
			Total	119891:110250: 9641
			<b>b. Hunting</b>	
17	2	-2 -1	Hunters	503: 499: 4
			Total	503: 499: 4
			Total of stock raising and hunting	120394:110749: 9645
			<b>C. FISHING</b>	11810: 11643: 167

\*Recensement de la Population de la Grèce, 1920, p. 40.



Table IV. OCCUPATIONS OF THE POPULATION\*

General categories of occupations	Total	Males	Females
Agriculture, stock raising, hunting and fishing	926,314	817,539	108,775
Industry	380,391	319,460	60,931
Commerce	150,884	146,830	4,054
Public and private administration, liberal professions and arts	137,003	90,362	46,641
Total:	1,594,592	1,374,191	220,401

General categories of occupations	Percent of total number gainfully employed	Percent of total males gainfully employed	Percent of total females gainfully employed
Agriculture, stock raising, hunting and fishing	58.09	59.49	49.35
Industry	23.86	23.25	27.65
Commerce	9.46	10.68	1.84
Public and private administration, liberal professions and arts	8.59	6.58	21.16
Total:	100.00	100.00	100.00

\*Recensement de la Population de la Grèce, 1920.

(forests) and all other agricultural occupations that are concerned with the exploitation of land, and under "stock raising and hunting," such enterprises as deal exclusively with the raising of animals and hunting. In almost all classifications the figures for stock raising and hunting are combined.

The number of gainfully employed people in the above two general groups of occupations may be better presented by the following figures for 1920 and 1928:\*

	(1)	(2)
	1920	1928
Total population of Greece	5,021,790	6,204,684
Number of gainfully employed persons in agricultural industries:		
Land exploitation	794,110	1,293,398
Stock raising and hunting	120,394	167,302
Total number of persons 10 years of age and over:		
No occupation (housewives, school children, students, "rentiers," pensioners, etc.)	2,050,767	2,069,212
Occupation was not declared	245,685	330,430
Gainfully employed in all occupations (including agriculture) <sup>(3)</sup>	1,621,558	2,415,078

\*Recensement de la Population de la Grèce, 1920.

Annuaire Statistique de la Grèce, 1930.

(1) The total population enumerated at the census of 1920 was 5,536,375, but from this must be deducted, for a proper comparison, the population of eastern Thrace, Imbros and Tenedos (lost in 1923), numbering 514,585. Hence it is this figure of 5,021,790 which is adopted throughout the 1920 census report as a basis of comparison.

(2) The figures for 1928 include the refugee population.

(3) These calculations are based on figures of occupations of the population of Greece given in the census of population for 1920, and the Annuaire Statistique de la Grèce, 1930.



The census of 1907 contained the same classification of "persons with no occupation," but the census of 1920 has added to it all children below 10 years of age. The same census made no special study of dependents, apart from the information available from the classification of families. (See Table V).

The attempt made by the census of 1920 to determine the social status of persons of the agricultural profession has not met with much success on account of the defective answers given on the individual cards. Detailed discussion of this subject may be found in sections F and J' (Farm Labor and Land Tenure).

Table 22 of the census of 1920 shows the number of families and their members classified according to the occupation of the heads of the family. In this table are given separate figures for families whose heads are engaged in agriculture proper, forestry, industry and hunting. Total figures are available for members belonging to families in each of the four agricultural occupations. These figures show the approximate number of members of families working on their farms or in other occupations, irrespective of age and sex.

The division into urban and rural population is given by departments. Table 8 on page LB' contains the following classification of the inhabited centers (towns and villages) according to number of population of each:

Number of inhabitants	Number of localities	Population
Under 50	1,778	42,213
51 -- 100	1,416	105,589
101 -- 200	2,124	312,320
201 - 300	1,423	352,451
301 - 400	1,082	375,851
401 - 500	733	328,440
501 - 700	865	509,109
701 - 1000	602	497,566
1001 - 1500	363	439,979
1501 - 2000	147	249,033
2001 - 2500	68	149,719
2501 - 3000	39	113,978
3001 - 3500	31	93,794
3501 - 4000	7	25,893
4001 - 5000	23	101,613
5001 - 6000	8	43,786
6001 - 7000	9	58,076
7001 - 8000	10	74,267
8001 - 9000	2	16,824
9001 -10000	4	37,857
10001 and over	12	148,266

Recensement de la Population de la Grèce, 1920.

Note: The Greek word "Synoikismos," settlement, is used in the Greek census to denote an inhabited locality, whether town, hamlet, or village. It is a territorial and not an administrative term. Thus, a municipality (Demos) or commune (Koinotis) may be composed of several distinct settlements (Synoikismoï). For example, the municipal district of Athens, at the time of the census of 1920, was composed of 39 such "synoikismoï" (the town of Athens proper and 38 other minor localities). Thus, whereas according to the census of 1920, there were in all 40 municipal and 4737 communal districts, there were no less than 11,644 towns and villages or settlements. It would be clearer perhaps to say "towns and villages" instead of "localities" or settlements.



(1)

Table V. NUMBER OF DEPENDENTS AMONG THE POPULATION OF GREECE

	1920	1928
All persons 10 years and above without occupation	2,050,767	2,069,212
All persons below 10 years of age	1,103,780	1,389,964
<b>Total dependents:</b>	<b>3,154,547</b>	<b>3,459,176</b>
Occupation not declared	245,685	330,430
Gainfully employed	1,621,558	2,415,078
<b>Total population</b>	<b>5,021,790</b>	<b>6,204,684</b>

(1) Annuaire Statistique de la Grèce, 1930.

The number of dependents among the agricultural population is not given separately.

Note: The figures on dependents represent the number of people who were not working productively, but were being supported by the gainfully employed persons in all occupations including agriculture.

The Statistical Office, following the above classification of the population, treats as rural all persons living in localities having less than 5000 population. All other localities inhabited by more than 5000 are regarded as urban centers. This is a very rough-and-ready method of separating the rural from the urban population, and is contrary to the recommendations made by the Institut International de Statistique. The census of 1907 made no distinction between urban and rural population. The census of 1920 does not make a detailed study of it, but simply draws an arbitrary line at the 5000-population limit without entering into other distinctions or explanations. Under this system of classification, many towns with fewer than 5000 inhabitants, although strictly urban in character, are treated as rural. On the other hand, all places with more than 5000 people are treated as urban, although many of them may be of a distinctly rural character, as in the case of Corinth and Cailaria, with a population of respectively 6141 and 7103, which are decidedly rural communities. The above two instances are taken from a table (No. 8, p. LB'), showing all towns with a population of more than 5000. The distribution of urban and rural population by years and according to size of municipality and commune is shown in Tables VI, VII and VIII.

The average density of the population per square kilometer\* in 1920 was 39.54. The density of the rural population is not given, but an approximate figure may be derived from the density of the population of certain regions regarded as predominantly rural. Table 59 on page ob gives the proportion of cultivators per square kilometer (including people employed in wood and forest enterprises) and of stock raisers (excluding hunters) in each of the main territories. The number of cultivators per square kilometer, calculated on the basis of an area of 127,000.16 square kilometers,\*\* is 6.25, of livestock breeders 0.94, and of cultivators and stock breeders together 7.20. With the exception of the Ionian Islands, where the figure is 19.26 per square kilometer, the density of the agricultural population in the other sections of the country does not vary much from the average for the whole country. A comparison of the density of population by years is given in Table IX.

The census of 1920 makes no distinction between rural and agricultural population. Table 22, page CXII, shows the number of families and their members according to the occupations of the heads of families. The total number of heads of families engaged in agriculture, forest and wood industries and stock raising is 480,925. The total number of members of these families that are actually living on the land, irrespective of occupation and age, is 2,295,016.

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\* 1 square kilometer = 247,110 acres.

\*\*This figure represents the area after deducting the territories lost in 1923 (Eastern Thrace, Karagatch, Imbros and Tenedos). A later and more accurate computation gives 130,199 square kilometers. The latter figure is the one that appears in the monthly statistical bulletins published by the Statistical Service since May, 1929.



Table VI. RURAL AND URBAN POPULATION OF GREECE ACCORDING TO CENSUS FROM 1879 to 1928

Year of Census	Total population	Population		
		Urban	Rural	
		(1) Cities	(2) Towns	Villages
1879	1,653,767	292,997	161,707	1,199,063
1889	2,187,208	464,658	189,504	1,533,046
1896	2,433,806	525,866	235,471	1,672,469
1907	2,631,952	627,973	242,236	1,761,743
1920	5,016,889	1,336,371	486,383	3,194,135
1928	6,204,684	2,064,696	571,735	3,568,253

Year of Census	Relative distribution of population		
	Percentage in cities	Percentage in towns	Percentage in villages
	1879	18	10
1889	21	9	70
1896	22	9	69
1907	24	9	67
1920	27	10	63
1928	33	9	58

(1) With a population of 5001 or above.

(2) With a population from 2001 to 5000 inhabitants. Source: *Annuaire Statistique de la Grèce*, 1930.

Note: The rural population in Greece is the population inhabiting towns and villages of not more than 5000 inhabitants. According to this classification, the rural population of Greece in 1920 was 3,680,518 while the urban population (i.e., those living in towns or cities of more than 5000 inhabitants) was 1,336,371, out of a total population of Greece of 5,016,889. According to the 1928 census, the rural population was 4,139,988 and the urban population 2,064,696, out of a total population of 6,204,684.

Table VII. URBAN POPULATION ACCORDING TO SIZE OF MUNICIPALITY, 1920 and 1928\*

Number of inhabitants	Number of municipalities		Total population	
	1920	1928	1920	1928
Less than 10,000	12	13	88,602	93,170
10,000 - 15,000	11	15	138,756	183,263
15,000 - 20,000	2	4	35,418	66,972
20,000 - 25,000	7	4	149,170	85,532
25,000 - 30,000	2	4	57,864	110,629
30,000 - 50,000	2	8	60,615	284,865
50,000 - 100,000	1	2	53,255	115,488
100,000 and more	3	3	627,432	955,550
<b>Total</b>	<b>40</b>	<b>53</b>	<b>1,211,112</b>	<b>1,895,469</b>

\* Annuaire Statistique de la Grèce, 1930.



Table VIII. POPULATION ACCORDING TO COMMUNES\*

Number of inhabitants	Number of communes	Total population
Under 50	27	785
51 - 100	29	2,219
101 - 200	241	39,050
201 - 300	599	151,612
301 - 400	653	229,005
401 - 500	625	280,581
501 - 700	915	541,806
701 - 1000	744	616,146
1001 - 1500	471	573,379
1501 - 2000	184	313,327
2001 - 2500	98	214,745
2501 - 3000	57	157,160
3001 - 3500	41	133,857
3501 - 4000	16	59,108
4001 - 5000	19	81,364
5001 - 8000	22	131,187
<u>8001 and more</u>	<u>8</u>	<u>78,554</u>
<b>Total</b>	<b>4,749</b>	<b>3,603,885</b>

\*Recensement de la Population de la Grèce, 1920.

Note: The general Greek word "Koinotis" is used in two senses: (1) "Commune," the lowest administrative unit, as in France; (2) "Community," in the religious sense e.g. "the Jewish community," "the Moslem community," etc. In the Greek census it is used with the first of the two meanings and should therefore always be translated "Commune." A commune is not necessarily a village, though, as a rule, every large-sized village is a commune. A commune may be composed of several small villages. Strictly speaking, it is not a village but a village district, i.e., the village plus a certain area of land around it.

Table IX. POPULATION AND TOTAL AREA OF GREECE FROM 1870 to 1920\*

Year	Population	Area in square kilometers (1)	Density per square kilometer (2)
1870	1,457,894	50,211	29.04
1879	1,679,470	50,211	33.45
1889	2,187,208	63,606	34.39
1896	2,433,806	63,606	38.26
1907	2,651,952	63,211	41.64
1920	5,531,474	150,833	36.67
1928	6,204,684	130,199	47.66

\*Recensement de la Population de la Grèce, 1928, p. 1n

(1) Including rivers and lakes.

(2) 1 hectare = 2.47 acres.

1 stremma = .247 "

1 square kilometer = 247.104 acres.



The previous censuses had not paid much attention to the number of families as a whole. The censuses of 1861, 1870 and 1879 were concerned with a simple enumeration of families in proportion to the total population of Greece. The census of 1907 does not even show the total number of families. The census of 1920 made a detailed study of families, collecting the information both through the individual cards and from the family envelopes, as explained in the first part of this section. The families, for purposes of classification, were divided into two categories: First, families connected through the bond of relationship; and second, families made up of groups of persons living together who might not be related to each other but counted as families in a wider sense, such as the denizens of hotels, hospitals, ships, educational and philanthropic institutions, etc.

The classification of families according to occupation, and their composition according to sex, age and family relationship is carried into considerable detail. Separate tables show the number of female heads of families working productively in the various agricultural and industrial enterprises.

The classification of the population into age groups is done in great detail by the Statistical Office. The population was enumerated by months for those below one year of age, for those from 1 to 29 by years, and for those from 30 to 99 by full five-year intervals. Table X shows the population of Greece on an adult-unit basis.

The age classes for the various occupations were worked out for the first time in the census of 1920. The total population of Greece according to occupations, sex and age is given in great detail in numerous tables. The classification of ages by occupation is available for all categories of the technological classification of occupations. Table XI gives figures for agriculture.

For a comparison of the results of the census of population of 1920 with regard to occupations related to industry and commerce, one should consult the results of the census of industrial enterprises (recensement des entreprises industrielles) which was taken in the same year. Table XII gives some of the figures.

The complete results of the census of population of 1928 have not yet been published. This census was taken two years before the normal time (1930) on account of the extraordinary influx of refugees from Russia and Turkey as a result of the Russian Revolution and the Greco-Turkish War of 1920-22, and the need for a fresh count of the population, following the extensive exchanges of population between Greece on the one hand and Turkey and Bulgaria on the other, which were the result of special treaties (Convention of Neuilly of Nov. 27, 1919 between Bulgaria and Greece and Convention of Lausanne of Jan. 30, 1923 between Turkey and Greece).

Table X. ADULT UNITS OF POPULATION IN GREECE, 1920\*

Age group	Adult units
0 - 3	56,758
4 - 6	140,452
7 - 10	393,533
11 - 14	417,280
15 and over, male	1,601,684
15 and over, female	1,532,018
Total:	4,141,725

\*These units were calculated from figures on population given in "Recensement de la Population de la Grèce, 1920."



Table XI. TOTAL AGRICULTURAL POPULATION GAINFULLY EMPLOYED  
10 YEARS OLD AND OVER ACCORDING TO SEX, AGE,  
AND OCCUPATION\*

	Total	10-19	20-29	30-39	40-49
<u>Both sexes</u>					
Agriculture	794110	129433	156946	140007	142739
Stock raising and hunting	120394	47921	18739	15080	15329
Total:	914504	177354	175685	155087	158068
<u>Males</u>					
Agriculture	695147	106604	137386	121383	126677
Stock raising and hunting	110749	43420	17260	14007	14241
Total:	805896	150024	154646	135390	140918
<u>Females</u>					
Agriculture	98963	22829	19560	18624	16062
Stock raising and hunting	9645	4501	1479	1073	1088
Total:	108608	27330	21039	19697	17150
<u>Both sexes</u>					
Fishing	11810	2008	2710	2206	2275
<u>Both sexes</u>					
	50-59	60 and above	Age not stated	Total of all groups	
<u>Both sexes</u>					
Agriculture	109483	115017	485		
Stock raising and hunting	11027	12227	71		
Total	120510	127244	556		
<u>Males</u>					
Agriculture	98266	104413	418		
Stock raising and hunting	10349	11406	66		
Total	108615	115819	484		
<u>Females</u>					
Agriculture	11217	10604	67		
Stock raising and hunting	678	821	5		
Total:	11895	11425	72		
<u>Both sexes</u>					
Fishing	1498	1139	14		

\* Recensement de la Population de la Grèce, 1920, p.120-127.  
For explanations, see Section D (Population)

Table XII. POPULATION ABOVE 10 YEARS OF AGE ACCORDING TO  
GENERAL GROUPS OF OCCUPATIONS

Year	Agriculture, stock raising, hunting and fishing	Industry, mines, transportation and communica- tion	Commerce, credit, etc.	Other occupations
	(1) 1920	926,314	379,904	141,452
(2) 1928	1,475,641	542,929	208,497	188,011

Year	Total	Percent of total occupations			
		Agriculture, etc.	Industry etc.	Commerce, etc.	Other occupations
(1) 1920	1,610,286	57.53	23.59	8.78	10.10
(2) 1928	2,415,078	61.10	22.48	8.63	7.79

(1) Recensement de la Population Grèce. 1920.

(2) Annuaire statistique de la Grèce, 1930, p.76.

Note: The difference in figures between the years 1920 and 1928 is explained by the fact that during the period of 1922-1924 about 1,100,000 refugees entered Greece as a result of the exchange of populations between Greece and Turkey.



Some account of these great racial migrations which took place in the Balkans during the period 1913-1924 is essential if one is to understand the figures of population as recorded in the Greek censuses of 1920 and 1928.

Until 1923, Greece was far from possessing a homogeneous population from the racial point of view. The alien elements - Turks, Bulgars, Albanians, Roumanian Vlachs, Armenians, Spanish Jews - at the time of the census of 1920 represented about 20 percent of the total population. These were mostly to be found in the Northern provinces (Macedonia, Epirus, Thrace) and in the islands of Crete, Lesbos, and Lemnos. The Turks, Albanians, Bulgars, and Vlachs are predominantly agricultural, whereas the Armenians and Jews are town-dwellers.

The Bulgarian population inhabiting Macedonia and Thrace began to emigrate to Bulgaria, as the result of an arrangement concluded between Greece and Bulgaria (Convention of Neuilly), in 1919. This emigration was compensated by a corresponding immigration of Greeks from Bulgaria.

In 1922 occurred the catastrophic expulsion of the Greeks from Turkey as the result of the Greek defeat in Asia Minor. During the period 1922-24, 1,100,000 refugees entered Greece. This immigration was partly compensated by the simultaneous emigration of 390,000 Turks from Greece under a special arrangement concluded with Turkey in 1923 (Convention of Lausanne for the Exchange of Populations between Greece and Turkey). During the years 1919-1920, there also took place a considerable influx of refugees from Russia. These numbered about 58,000. Besides the Greek refugees from Turkey, there were also a large number of Armenians (some 40,000) who came at the same time.

It is this immense influx of refugees (only partly compensated by the emigration of Turks and Bulgars) which accounts for the striking increase of the population of Greece, as shown by the census of 1928. For whereas, at the census of 1920, Greece was a country with an area of 150,833 square kilometers and a population of 5,531,474 (or 36.67 per square kilometer), at the census of 1928, in spite of a reduced area (130,199 square kilometers) due to the loss of Eastern Thrace, Karagatch, and the islands of Imbros and Tenedos, the population had increased to 6,201,684 (or 47.66 per square kilometer).

The effect of these exchanges was to reduce the alien element in the population from 19.50 percent to 6.25 percent. This today is made up roughly of 103,000 Turks in Western Thrace (who are not exchangeable), 82,000 Bulgars in Western Macedonia, 25,000 Albanians in Epirus, 35,000 Armenians, scattered in various parts of Greece, 70,000 Spanish Jews, and 73,000 foreign subjects of different nationalities. (For detailed figures on these migrations, see the articles on Racial Migrations in the Balkans in the Years 1912-1924 in the Geographical Journal (London) of October 1925, and on The Greek Census of 1928 in the same Journal (June 1929) by A. A. Pallis; also 'Les Effets de la Guerre sur la Population de la Grèce' by the same author in 'Les Effets Économiques et Sociaux de la Guerre en Grèce', published by the Dotation Carnegie (Paris 1928).



Of the 1,222,000 refugees\* and other immigrants who entered Greece during this period (1920-28), only 47 percent were cultivators, the remainder belonging to the urban class. The agricultural refugee population was settled on the lands abandoned by the Turks and Bulgars. [For details of this settlement, which has had very far-reaching effects on the whole social and economic life of Greece, see the report of the Refugees Settlement Commission entitled "Greek Refugee Settlement," published by the League of Nations in 1926 (Economic and Financial Series 1926, II.32)].

Apart from the alien elements mentioned above, the purely Greek portion of the population itself is composed of somewhat heterogeneous elements exhibiting considerable differences of language, culture and customs. Besides the Hellenic-speaking majority, there is also quite a large Albanian-speaking Greek population in the rural districts of Attica, Argolis, and some of the islands. These are descendants of Albanian immigrants who settled in Greece in the 14th century. They are bilingual, and belong to the Greek orthodox church. In official statistics of population, only the Moslem Albanians, (who inhabit the district of Tchamouria in Epirus) are classed as Albanians, the Christian Albanians having long ago been Hellenized, except for the fact that they still speak an Albanian patois.

Another distinct element in the Greek population is that of the Nomads (Vlachs and Sarakatsans). The Vlachs are a Latin-speaking race who for centuries have been the shepherds and carriers of the Balkans. They are still very primitive in their habits, being organized on the patriarchal system under the leadership of a "tselingas," or chief shepherd. According to the special study of them made by Mr. D. Syrakis, Inspector General of Agriculture (see Bulletin of the Greek Agricultural Society for March-October, 1925), there are about 4195 of these Vlach families in the whole of Greece. The Sarakatsans, who are Greek-speaking nomads, number 5956 families.

In Macedonia, besides the Bulgarian minority, a portion of the Greek population also speaks Slav as its home language. Of the refugee population which came in during the years 1922-23, a considerable number are bilingual, Turkish being the language they speak in their homes. These come mostly from Central and Eastern Anatolia and the Caucasus.

Table XIII following, published in the Bulletin Mensuel de statistique for June 1930, gives the classification of the population according to language and religion, as returned at the census of 1928. (This is the first time that such a classification has been officially published).

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\*For analysis according to country of origin, see Bulletin Mensuel de Statistique for February, 1929.



Table XIII. DISTRIBUTION OF THE POPULATION BY RELIGIONS  
AND LANGUAGES

(Census of 1928)

Languages	Total	Christians		
		Orthodox	Roman Catholics	Protestants
Greek	5,759,523	5,716,100	27,747	3,867
Turkish	191,254	103,642	327	760
Macedonian Slav	81,984	81,844	68	11
Spanish	63,200	28	58	41
Armenian	33,634	31,038	1,136	1,432
Koutsovlach	19,703	19,679	9	2
Albanian	18,773	95	59	17
Bulgarian	16,775	20	-	-
Gipsy	4,998	3,853	-	1
Russian	3,295	3,177	49	14
Italian	3,199	98	2,878	18
English	2,098	201	274	1,605
Other foreign languages	6,248	1,754	2,577	1,235
Total of foreign languages	445,161	245,429	7,435	5,136
General total	6,204,684	5,961,529	35,182	9,003

Table XIII. DISTRIBUTION OF THE POPULATION BY RELIGIONS  
AND LANGUAGES (Continued)

(Census of 1928)

Languages	Mussulmans	Jews	Other religions	Without religion
Greek	2,623	9,090	15	81
Turkish	86,506	17	1	1
Macedonian Slav	2	58	-	1
Spanish	72	62,999	-	2
Armenian	16	10	2	-
Koutsovlach	3	10	-	-
Albanian	18,598	3	1	-
Bulgarian	16,755	-	-	-
Gipsy	1,130	-	14	-
Russian	3	40	-	12
Italian	1	203	-	1
English	1	15	-	2
Other foreign languages	307	346	12	17
Total of foreign languages	123,394	63,701	30	36
General total	126,017	72,791	45	117



F. Farm Labor

Part I lists as a source, Recensement de la Population de la Grèce, 1920. Résultats Statistiques Généraux.

The important other sources of information are as follows:

Reports of the personnel of the inspection of labor. Concerning the application of the labor laws, 1920. Direction of labor and social insurance. Inspection of Labor. Ministry of National Economy.

Recensement des Entreprises Industrielles, 1920. Statistique Générale de la Grèce. Ministère de l'Économie Nationale.

Statistical information on farm labor in Greece is very defective. The agricultural census of 1911 does not give any statistical information concerning labor, as it is concerned only with the enumeration of cultivated areas, crops, and domestic animals. The only reliable sources are the census of population of 1920 and the annual reports of the Inspectorate of Labor of the Ministry of National Economy. In Section E (Population) the general technological classification of occupations on a vocational basis, constructed so as to include all occupations in all categories was discussed. Question 8 on the individual cards used for the enumeration of the population in 1920 asked, in connection with the occupation of agriculture, whether the person owned the farm or was a tenant, cultivator, métayer or agricultural laborer. No other inquiry was made with regard to farm labor. The results of the census as to question 8 were very unsatisfactory. As in the case of tenants, the limited number of answers did not reveal the exact number of farm laborers in the country. Section J' (Land Tenure) shows the general table under which were classified the occupations connected with agriculture. These categories designate the different social classes in that profession.

The table mentioned above shows that the number of workers or laborers in the three allied agricultural industries were:

	Agriculture, forests	Stock raising	Fishing
Males	59,012	7,772	1,237
Females	<u>8,173</u>	<u>333</u>	<u>22</u>
Total	67,185	8,105	1,259

These figures, of course, in no way represent the real number of farm laborers in Greece since 313,960 people employed in agricultural operations omitted to state on their individual cards their "social class."

The only other classification that has been made with regard to farm work is the one found in the "classes," under each of the above mentioned categories. No other distinction is made with regard to farm labor. However, the number of persons occupied in farm work in each of the above classes is available from the 1920 census of population. (See Table III for figures). The census gives separately the number of men and women employed in agricultural occupations. As regards the women, no indication is given as to whether they were working on their own farms or as seasonal or per diem laborers. Their main occupation was presumably agriculture, but it is not made clear whether they were heads of families or managers. There are other tables showing the number of women working on farms as a secondary or auxiliary occupation. All classifications are made for the whole of Greece and separately for each one of the ten geographic divisions of the country.

The census gives exact information regarding child labor. A number of tables under the section on occupations, page 120, show, as mentioned in Section E, the actual population of Greece above ten years of age, according to sex, age and occupation. (Table XI in Section E gives the figures for agricultural population). Classified according to sex, the number of males between 10 and 19 years of age engaged in agriculture was 106,604, and the number of females 22,829. Although the census report does not comment upon the large number of children engaged in agriculture as contrasted with other classified industries, it is undoubtedly true that most of these children divide their time between school and farm work until they are 15 or 16 years of age. The total number of gainfully employed people in Greece in 1920 amounted to 1,621,558. This figure comprises all occupations included in the eleven categories previously discussed. The following figures may make the discussion clearer:

1. Total number of gainfully employed persons . . . . .	1,621,558
2. Number of gainfully employed persons in agriculture, stock-raising, and fishing, as their principal occupation . . . . .	926,314
3. Total number of persons having a secondary occupation besides the principal one . . . . .	104,152
4. Number of persons having no secondary occupation . . . . .	1,517,406
5. Number of persons having a secondary occupation, and employed principally in agriculture . . . . .	23,378
"          "          "          " stock-raising . . . . .	15,049
"          "          "          " fishing . . . . .	1,196



The census does not give any information on seasonal labor or movement of farm labor from district to district. In separate tables it shows the number of people employed in agricultural enterprises with secondary occupations in agricultural industries, commerce, industry, and other branches. The census reports do not make any distinction between farm operators and farm laborers, or between farm owners and managers or tenants.

A detailed study of industrial labor in Greece will be found in the Recensement des Entreprises Industrielles. However, it deals only with the five categories closely connected with industrial occupations. It includes the industry dealing with the manufacture of agricultural, animal, and fishing products.

#### G. Vital Statistics

The most important source of information is Statistique du Mouvement de la Population, 1921. Statistique Générale de la Grèce. Ministère de l'Economie Nationale.

Vital statistics in Greece are recorded under the heading "movement of the population." Data as to vital statistics of the country go as far back as 1860, but before 1920, there was no information available concerning the system of registration of births, deaths and marriages. Systematic work on vital statistics began in 1921, when for the first time complete statistics of population were made available.

The data concerning marriages, births, and deaths are taken from the registrar's books in each commune or municipality. The mayors are required by law to keep a detailed record concerning vital statistics. Since 1921 the information has been tabulated in special tables and submitted quarterly to the Central Statistical Service at the Ministry of National Economy by the mayors, acting as official registrars.

No individual cards are used for collecting the data on vital statistics. The Statistical Office has found their use impracticable, at least for the first years after the resumption of this work in 1921 following a long interruption of the study of the movement of population. The quarterly reports of registrations, submitted to the Statistical Office by the registrars, were found to give regular and uniform results. The data collected in 1921 were not complete nor representative of the normal situation throughout the country. In many communes, births, marriages, deaths, and divorces were not registered at all, and in a great many towns and villages, the tables concerning vital statistics were defective and unreliable.

Statistical data concerning divorces, adoptions, and legitimizations are obtained not from the registrar's books but directly from the Statistical Service of the Ministry of Justice.

In order to calculate the population of the country in 1921, the 1920 population was taken as a basis and to it was added the sum (estimated as explained below) of the positive or negative excesses of births over deaths. Since many communes had failed to submit their returns for 1921, the population for that year was estimated by the Statistical Office on the basis of the following formula: If by  $b$  is represented the population resulting from the census of 1920 for which there is available information, by  $v$  the corresponding excess of births over deaths, and by  $c$  the population of the communes for which there is no available information, the corresponding excess would be  $v$  times  $\frac{c}{b}$ . Consequently, the population of each prefecture in 1921 would correspond to a formula

$$b + c + v + v \frac{c}{b} .$$

The statistics of births are supplied to the Statistical Office by the municipalities and communes which act as registrars of births. The *Statistique du Mouvement de la Population*, published annually by the Statistical Service, presents the returns for each municipality or commune in great detail.

As there is no civil marriage in Greece, marriages are registered at the parish, the licence being issued by the bishop. The classification of marriages by the Statistical Office, according to months and seasons, is given in lengthy tables, showing the numbers by departments, and the previous matrimonial state of the married people (unmarried, widowers, widows, divorced).

The data with regard to divorces are secured by the Ministry of Justice from the courts of first instance, and are subsequently transmitted to the Statistical Office.

Deaths are registered by the municipalities and communes; it is they that issue the burial permit. The *Statistique du Mouvement de la Population* contains a complete analysis of the death rates on the basis of the number of persons who died in 1921. The classification of the dead by sex and age is made by years until the 14th, and beyond that, in groups of five years. Data for the years since 1921 may be found in the *Statistique du Mouvement de la Population* for the corresponding years, published by the Statistical Office in the Ministry of National Economy.

#### H. Land Utilization

Sources in Part I are, *Recensement Agricole de 1911*; *Statistique Annuelle du Rendement Agricole*, and *Bulletin Mensuel de Statistique* (February 1931).



Other important sources are as follows:

Schedules of the agricultural census of 1929.  
Statistical Office, Greece.

The public forests of Greece (in Greek). Ministry  
of Agriculture (Department of Forests). Athens 1929.

The first official classification of the land area of Greece according to use was made in the agricultural census of 1911. No earlier classification of land in Greece is known to have been made. This agricultural census was concerned with three fields of agricultural inquiry:

- a. Enumeration of agricultural areas.
- b. Enumeration of livestock.
- c. Enumeration of fruit trees and fruits.

The census was taken on individual printed blanks, according to the methods employed in taking the census of population. The blanks were distributed by the préfets in each department to local committees. Each committee consisted of a priest, a teacher, and one or two other persons selected from among the best farmers of the locality, the number of these varying according to the size of the locality or commune. All farmers in the commune were interviewed by the committee and asked to state:

1. The area of agricultural land in their possession.
2. Their production, by kinds of crops, for the year 1911.
3. Their "farm status" - whether they were landowners, tenants, laborers, or working under the system of "métayage."\*

The basic unit in this census was the farm operator, (or "cultivator") and "livestock raiser." No clear definition of such a farm operator, however, is given in the official 1911 census publication. For instance, the minimum holding of a farm operator as included in this census is not given. It is not known, therefore, whether or not the figures on land utilization, reported in the Recensement Agricole de 1911, include the land in town gardens and other small patches of land. Furthermore, it is not known for certain whether waste land on individual farms, public land not exploited by private individuals, or uncultivated land not in pasture or under forest is included or not.

These individual farm reports were tabulated by the Statistical Office at the Ministry of National Economy, Athens. This office, however, questions the accuracy of the data obtained in the census of 1911. It points out that this was the first agricultural census undertaken in Greece, and that many peasants probably understated their acreage of

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\*See Section on Land Tenure.



land and production of crops and livestock products for fear of additional taxation. For the same reason, the Statistical Office has not published details concerning the area of land under forest reported at this census. In all the classifications of land area in 1911, the area of land under forest is given as it was determined in a special forest survey made some years earlier, at a date which is not stated. In this report, only the total area of forest land in Greece is given, and no distinction is made as between public and private forest lands.

No standard unit for measuring land area was in use in Greece at the time of the enumeration. There was a large variety of units of the metric system, especially of area, in use in different parts of the country. The Statistical Office aimed at unifying these units of measure, many of which went under different names in different parts of the country, while in other cases, units of the same name represented areas of different size. The common unit of land measurement which it adopted was the "royal stremma," which equals about 1/10 of a hectare and about 1/4 of an acre. In order to avoid confusion and inaccurate results, the Statistical Office instructed farmers to report the area of their land in terms of the land unit in common use in their district and each of these land units was then converted to the equivalent number of stremmas.

In Greece there are no cadastral registers, because there has been no general land survey. Consequently, information on land utilization obtained from the peasants could not be checked against any official survey.

The agricultural census of 1911 comprises statistics of land area in the territories which made up the Greek Kingdom prior to 1912. No similar census was taken in 1914 or in later years to determine the agricultural area in the new provinces annexed to Greece in 1912-13 and in 1919. The classification of land in these new provinces in subsequent years was determined, as far as the writer can judge, from the annual reports of crop acreage in Greece, by special committees in each commune, following the instructions of the Statistical Service at Athens. From this bibliography and other statistical literature published by the Statistique Générale de la Grèce, it appears that no special census of the land area in the new provinces was taken until the general agricultural census of 1929.

The estimates of cultivation and production that were made in 1914 for the new provinces of Macedonia, Epirus, Crete and the Aegean Islands, and in 1923-24 for Western Thrace, have been published in the Statistique Annuelle du Rendement Agricole, an annual bulletin published by the Statistical Office at Athens. This office in 1914 published a separate statistical report on land utilization and crop production in the new territories. The method used in estimating the annual utilization of land and production of crops in Greece is explained in detail below.



The agricultural census of 1911 made a general study of the productive areas of the country. By "productive area," the Statistical Office meant the lands which were actually used or that were capable of being used for productive purposes. According to this definition, certain marshes and waste lands, as shown below, were treated as productive lands. The productive area of the five old provinces of Greece was classified in the census report in four large categories, as follows:

1. Cultivated areas (arable lands).
2. Meadows and pastures.
3. Forests.
4. Areas capable of cultivation, but which were at the time of the enumeration, marshes and waste land.

Under cultivated areas were included the areas of land under:

1. Field crops, including fallow lands.
2. Vegetable gardens and orchards.
3. Vineyards for grapes and currants.
4. Olive yards and fig plantations.

Under land in field crops is included all land used for the production of cereals, dry legumes, forage plants, rice, tobacco, industrial plants, as well as land lying fallow. No analysis is given of the land classified under orchards, vegetable gardens or vineyards. Orchards, olive yards and fig plantations are shown in a separate class, because lands so utilized are to be found only in certain parts of the country. The lands used for the production of grapes and currants, olives, and figs were given special attention because of their economic importance, and because their production is limited by regional conditions.

The above classification of land does not altogether agree with the classification for arable land recommended by the International Institute of Agriculture for the world census, since the areas planted in orchards and vineyards have been included, while artificial meadows have been omitted from the total cultivated area. The acreage of land in orchards, vineyards, and meadows, however, is given separately in the Greek census. The area of "meadows" reported in this census includes both artificial and permanent meadows; the total of both is small. Consequently, the area of arable land in Greece may be determined for 1911 on a basis fairly comparable to that recommended for the world census by adding the area of meadows to the area of cultivated land as reported in the 1911 census.

The second category of the productive land area of Greece includes meadows and pastures. The statistics which are given concerning these are most confusing. The Statistical Office points out that under "meadows and pastures" were included other productive lands not used as pastures

and meadows, but which were considered potential lands for similar agricultural uses. The census does not explain whether the acreage of land in pastures represents pasture land belonging to farms only, or the total pasture land in the country. With regard to meadows, no statement is made as to whether they are harvested or not. No distinction is made between permanent and temporary pastures. Consequently, it is impossible to determine the area of permanent meadows and pastures in Greece in 1911, in accordance with the recommendations of the International Institute of Agriculture for the world census.

The 1911 census does not give any details concerning the land included under forests. Neither are statistics given of forest land included in farms. The forests in Greece are divided into two categories, (1) public forests, and (2) forests belonging to private individuals. The statistical sources concerning the area of forest land in Greece are still incomplete. The Ministry of Agriculture (Department of Woods and Forests) published for the first time in 1929 details concerning the government forests, giving approximate area, varieties of trees, and amounts and values of annual forest produce, together with maps. Similar details concerning privately owned forests have not yet been published.

According to the publication mentioned above there are 16,684,000 stremmas of government forest land. These forests are put in 3 categories, tall, medium, and low, according to the degree of development of the trees. The trees are classified by varieties (pine, beech, oak, etc.). The tables indicate the area covered by each variety in each of the three categories mentioned above. According to the tables, the area for each category was: Tall, 4,728,000 stremmas; medium, 2,732,000; low, 9,224,000.

In the fourth group, the Statistical Office included all land occupied by swamps and marshes, as well as waste land capable of being brought under cultivation, but which at the time of the enumeration was covered by marshes. This land, according to the census of 1911, is classed as productive land.

No data concerning the area of unproductive land are to be found in the census of 1911. This census made a study of productive land only. Statistics with regard to area occupied by water, public gardens, roads, buildings, etc., are not available. This is due to the fact that as yet there exists no general topographical survey for the whole of Greece.

The data on land utilization have been summarized by communes and municipalities, provinces and departments (prefectures). The area of land in 1911 in each category per capita of the total population in Greece and in each of the prefectures (as shown by the population census of 1901) is also given in the Recensement Agricole de 1911.

The other main source of information on land utilization in Greece is the Statistique Annuelle Agricole de la Grèce which contains detailed statistics on the acreage cultivated. It does not give any detailed data



concerning the area of pastures, meadows, and woodland, apart from total figures of area.

As stated above, the annual bulletins contain information that is collected by special committees in each commune and locality. The method of collecting the data and enumerating the area of land year by year is not explained in the available bulletins. Whether or not the committee interviews the peasants or resorts to estimates based on data of previous years cannot be determined.

A much more detailed classification of land was made in the agricultural census of 1929, as is shown by the following list of questions asked of each farm operator.

1. Total area of land possessed by the cultivator (as owner or tenant) in the commune, irrigated or not. Do these lands consist of one piece or many, and how many?
2. The area of land planted in crops in 1929.
3. The area of land left fallow in 1929.
4. The area of land that could have been sown in 1929, but which was left uncultivated.
5. The area of land in meadows cut for hay, (a) natural, (b) artificial (clover).
6. The area of land in pastures:
  - (a) Pastures that can be plowed.
  - (b) Other pastures.
7. The area of land in orchards or fruit trees where no other crops are grown:
  - (a) Olive yards (exclusively for olive oil)
  - "      "      (      "      "      table olives)
  - (b) Fig plantations
  - (c) Berries
  - (d) Chestnut plantations
  - (e) Banana      "
  - (f) Other orchards
  - (g) Citrus orchards

The area for each kind of trees was asked to be stated separately.

8. The acreage of land in vineyards.
  - (a) Vineyards whose grapes are used exclusively for wine.
  - (b) Vineyards for table grapes.
  - (c) Vineyards not yet productive.

9. The area of land where currants are grown exclusively.
  - (a) Corinth currants (black).
  - (b) Sultana " (white).
  - (c) Rosakia.
10. The area of land used for growing vegetables.
11. The area of land used for growing flowers exclusively.
12. The area of land sown with crops which are not indicated in the agricultural schedule. The cultivator is asked to state the name of each crop.
13. The area of land under swamp:
  - (a) Swamps that may be cultivated.
  - (b) Swamps unfit for cultivation.
14. The area of marshy land.
15. The area of barren land.

The total figures of acreage, as ascertained by the 1929 census, have been published in the Bulletin Mensuel de Statistique for February, 1931. The Statistical Office, in publishing them, states that the results may be regarded, on the basis of the tests made, as having a degree of accuracy of 70 to 80 percent. Crops, it says, are somewhat understated. We give the figures in Table XIV following.

The total area of Greece being 130,199,000 stremmas, it follows that the cultivated or cultivable area, together with the cultivable pastures (stremmas 26,402,920), as returned at the census, represents about 20 percent of the total area. Of the remaining 80 percent, about 13 percent (16,684,000 stremmas), according to the published estimate (1929) of the Forest Department, represents the area of state forests. Although the area of the privately owned forests is not known, it does not represent any very considerable area, as most of the forests are owned by the State. We are, therefore, fairly safe in estimating that not more than 35 percent of the soil of Greece is today agriculturally exploitable. Swamps and barren mountains occupy a very great part of the area. Of these, a considerable part of the swampy area is capable of reclamation; work on this is already in progress.

This classification of land agrees very well with the recommendations made for a world census by the International Institute of Agriculture. Most of the land classifications given in the proposed schedule for the world census can be obtained by combinations of the above classes. "Wood and Forest Land" have not been included.



Table XIV. FARM AREAS AND AGRICULTURAL PRODUCTS ACCORDING TO THE AGRICULTURAL CENSUS OF 1929\*

Products	Area in stremmas	Total production in quintals	Value in thousands of drachmas
Cereals	10,466,399	7,126,463	2,859,468.2
Legumes in general	( 532,696	270,570	132,303.8
Beans	(	24,599	13,576.4
Vegetable-garden produce	296,081	1,602,352	176,753.9
Tobacco	1,012,240	687,443	1,943,684.8
Other industrial products	410,934	150,296	128,448.9
Bulbs and roots	121,816	641,186	110,431.1
<u>Animal food products</u>			
Meadows (clover, hay)	361,860	844,311	125,553.3
Cultivated oats	276,481	447,049	73,823.1
Varieties not cultivated	-	107,632	9,089.9
Other products	18,318	2,406	12,918.2
<u>Vineyards</u>			
Wine	1,164,425	2,547,918	586,217.1
Table grapes	71,314	184,325	47,047.7
Young vines	135,542	-	-
<u>Currant plantations</u>			
Black currants	500,426	1,221,689	846,997.0
Sultanas	63,278	127,962	101,745.9
Rosakia	26,353	43,061	12,138.9
<u>Pastures</u>			
Cultivable	1,948,665	-	-
Non-cultivable	9,212,521	-	-
<u>Olive yards and orchards</u>			
Olive oil	( 1,507,392	553,709	720,635.9
Table olives	(	226,963	134,035.6
Figs, mulberries, chestnuts	189,540	140,689	50,853.8
Orange, lemon and other fruit trees	72,657	-	-
<u>Areas not cultivated</u>			
Fallow	5,572,955	-	-
Other causes	1,274,664	-	-
<u>Marshy areas</u>			
Cultivable	159,245	-	-
Non-cultivable	191,447	-	-
Swamp	152,569	-	-
Barren land	2,840,409	-	-
<b>Total:</b>	<b>38,580,227</b>	<b>16,930,623</b>	<b>8,085,723.5</b>

\*Figures supplied by the General Statistical Department of the Ministry of National Economy.

Since each farm operator is asked to state the total area of land included in his farm, it should be possible to determine the area of land in farms that is not in any of the above classifications.

The method employed in taking this census did not differ to a great extent from the one employed in the census of 1911. A committee of five persons in each commune was responsible for the collection of the agricultural information from each peasant within nine days. The information was obtained through schedules which were filled in by the committee in the presence of the farmers. The information on public lands or lands in possession of public institutions was obtained from the authorities concerned, if they were being directly exploited by them, but in case the lands were leased, the schedules were filled in by the farmers who rented them. The committee, at the end of the period of the enumeration, was required to summarize the information and send it to the prefectures where the results were carefully checked and then sent on to the Statistical Office at Athens.

Each cultivator or farm operator, whether he was owner or tenant (or métayer), was asked to state the area of land that he operated in each of the above classifications. No schedules were filled in for landowners who were not operating their own lands personally or by hired labor, but who rented them to cultivators. Such lands were recorded in the schedule of tenants (or métayers) who rented them from the landowners.

Each cultivator or farmer reported the area of land in each of the above classifications in the units of measure with which he was familiar, the same as for the 1911 census. These local units of land measurement were then converted to the equivalent number of royal stremmas, the standard unit of measurement.

I. Ratio of Population to Land and of  
Agricultural Workers to the Land

The statistics are not sufficiently comparable to warrant developing these ratios in comparison with those of the United States.

J. Crops and their Acreage

Sources listed in Part I are, Recensement Agricole de 1911; Statistique Annuelle du Rendement Agricole, and Bulletin Mensuel de Statistique.

Another important source is:

Schedule of the agricultural Census of 1929.

Statistical Office, Greece.



The agricultural census of 1911 was the first official attempt to determine the acreage of different crops planted in Greece.\* This census covered rather less than half the present area of Greece. Since 1914 the acreage of land under important crops has been reported year by year in the *Statistique Annuelle du Rendement Agricole de la Grèce*. A second agricultural census was taken in December, 1929, the results of which have not yet been fully published.

In the 1911 agricultural census, the area of land under different crops or lying fallow was obtained according to the following classifications:

1. Cereals, 5 classes:  
Wheat, barley, maize, oats, rye.
2. Dry legumes, 10 classes:  
Beans, haricot beans, chick peas, lentils, peas, lupines, vetch, etc.
3. Vegetables, 9 classes:  
Potatoes, tomatoes, beets, onions, garlic, artichokes, cucumbers, melons, etc.
4. Industrial and aromatic plants, 6 classes:  
Tobacco, hashish, sesame, flax, domestic cotton, European cotton.
5. Special products, 1 class:  
Rice.
6. Forage crops, 5 classes:  
Barley and corn for straw, clover, oats, vetch.
7. Vineyards, 2 classes:  
(a) Nurseries  
(b) Producing grapes for table  
" " " wine
8. Currants, 2 varieties:  
Corinth and sultana.
9. Fallow lands.
10. Orchards.
11. Flower gardens - where flowers are raised exclusively.
12. Meadows - where hay is mowed.
13. Olive yards.
14. Fig plantations.

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\*See Section H for method of collecting data.

The total of these crop land areas less the area of land in meadows is called the cultivated area of Greece. Only a few relatively unimportant crops were omitted.

The area of land in the above classes, other than meadows, has also been summarized under four major headings.

1. Fields, including fallow land.
2. Vegetable gardens and orchards.
3. Vineyards (including currant vineyards).
4. Olive yards and fig plantations.

Summaries of all of the above data have been published for the country as a whole, and for each of the five principal territories separately.

The census of 1911 also ascertained the acreage of crops planted according to the system of "parepomene kalliergeia" (cultures dérobées). This is the multiple crop system, in which a second crop is planted and harvested on the same land on which a first crop has already been harvested during the same year. The census report for 1911, however, does not mention "intermittent" or "companion" crops grown on the same land at the same time. The multiple crops are classified in a special table according to the following categories:

1. Cereals: maize.
2. Dry legumes: beans, haricot beans, chick peas, lentils, peas, lupines, "fava" and vetch.
3. Vegetables: potatoes, tomatoes, onions, garlic, leeks, melons, watermelons and other vegetables.
4. Industrial and aromatic plants: sesame.

The total acreage of both the first and second crops is shown in the general crop table. The report of the census of 1911 makes no reference to multiple crops in its discussion, and consequently no further explanation is given on such crops.

As stated above, the census of 1911 was the first official attempt on the part of the government to collect information from the farmers concerning the acreage of different crops planted. The statistical department of the Chamber of Commerce of Volo, Thessaly, however, made an estimate of the acreage of crops planted in Thessaly from 1900 to 1906, which was published in 1907.

The method employed by the Chamber of Commerce in making these estimates was to ask the local boards in Thessaly to estimate the amount of seed sown or the acreage of each crop planted in their commune or municipality. For instance, they asked two questions in regard to cereals:



1. The kinds of cereals sown during the year.
2. The quantity of seed used for sowing each cereal during the year.

The estimates of seed used in sowing each cereal were converted into the equivalent numbers of stremmas by considering one "koilon" of grain seed (about 26 kilograms) as equivalent to two Thessalian stremmas of land (1800 square meters), and then finally expressing this result in terms of the official unit of land measurement in the country, the "royal stremma" (1000 square meters). With regard to the other crops planted, the Chamber of Commerce simply asked for information concerning the total area planted in all other crops. We give below a comparison of the acreage of crops planted in Thessaly in 1906, as estimated by the Volo Chamber of Commerce, with the results of the agricultural census for 1911:

Crops	Statistics of Volo Chamber of Commerce 1906 stremmas	Agricultural census 1911 stremmas
Wheat	832,580	952,021
Barley	210,880	198,928
Maize	169,480	276,344
Beans	12,533	41,815
Tobacco	34,740	64,978
Potatoes	3,755	3,290
Total	1,263,968	1,537,376

The total acreage of these six crops in Thessaly as reported in the agricultural census for 1911 was 21 percent larger than the acreage estimated by the Volo Chamber of Commerce for 1906. Such an increase might, of course, have occurred. Since, however, the Statistical Office at Athens considers that the farmers reported less than their actual acreage of crops in 1911 for fear of taxation, it is likely that both estimates are too low.

From 1911 to 1929 the only official data on acreage of crops is that published by the Statistical Office each year in the *Statistique Annuelle du Rendement Agricole de la Grèce*.<sup>\*</sup> Such estimates were first published in 1914, both for the old and new provinces. These annual estimates of crop acreage are based upon the reports of local committees in each commune to the Statistical Office at Athens. The method of procedure followed by these committees in making their estimates, however, is not stated in the annual bulletins for 1914, 1918, or 1922 to 1928. It is not known, therefore, whether or not the acreages of each crop reported in the 1911 census were used as a basis and merely the percentage change in acreage from the preceding year estimated by the special committees, or whether these committees made a direct estimate of the acreage of each crop planted in the commune each year.

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<sup>\*</sup>In 1928 the name of this publication was changed to *Statistique Annuelle Agricole de la Grèce*.

The list of crops for which the acreages are reported in the annual bulletin for 1928 is somewhat smaller than the list included in the census schedule for 1911, as is shown by the following comparison:

Census of 1911		Statistique Annuelle Agricole, 1928.
1. Cereals:	5 classes	1. Cereals: 6 classes
2. Dry legumes:	10 "	2. Dry legumes: 5 "
3. Vegetables:	9 "	3. Vegetables: 2 "
4. Industrial plants:	6 "	4. Industrial plants: 5 "
5. Special products:	1 "	5. Forage crops: 5 "
6. Forage crops:	5 "	6. Vineyards (grapes): 1 "
7. Pastures:	2 "	7. " (currants): 2 "
8. Vineyards (grapes):	2 "	8. Acreage of crops
9. " (currants):	2 "	of which production
10. Forests:	2 "	was destroyed
11. Fallow lands:		

Under "companion crops," the only crop for which the acreage is reported in the 1928 annual bulletin is that of "dry beans," which is placed together with maize. No explanation is given in the annual reports as to whether or not other crops are planted according to the "multiple" or "companion" crop system.

In the agricultural census of 1929 farmers were asked to state acreage of individual crops according to the following classification:

1. Cereals, 12 classes, including rice.
2. Dry legumes, 9 classes.
3. Tuber and root crops, with more than 6 classes including potatoes, dry onions, garlic, etc.
4. Forage crops, 8 classes, including meadows.
5. Industrial crops, 11 classes, among which are:
  - (a) Tobacco, with 12 subclasses, showing the different varieties of this crop.
  - (b) Cotton, with 3 subclasses, such as:
    - (1) Native, (2) American, (3) Egyptian varieties.
6. Vegetables, 19 classes and more.
7. Other crops, 13 classes, including a variety of crops such as: olives (for table use), olive oil, figs, bananas, grapes, currants, other fruits.

The 1929 census schedule has not only been enlarged by the inclusion of many crops which were not represented in the schedule of 1911, but has changed the classification of these crops under various categories. Thus the "tuber and root crops" group includes crops that were formerly classified under vegetables. Rice has been classified under cereals. The crops classified under "vegetables" include the main vegetables grown in gardens. No distinction is made between vegetables



grown in commercial gardens and those grown in farm gardens for home consumption. For each of the enumerated crops, the acreage is shown in stremmas.

Some crops are classified under two categories in this schedule. Oats and barley, for example, are classified under both cereals and forage crops. According to instructions issued by the Statistical Office, the area of oats and barley harvested for grain was to be classified under cereals, and that harvested for straw under forage crops. The same instructions were given for such crops as onions, beans, and peas which were classified both under "dry legumes" and "vegetables". In the former group were recorded those lands planted with each of these products which were harvested when dry, and in the latter group, the acreage of these crops which were harvested in a fresh state.

To the group of crops under "cereals" in the 1929 census schedule have been added seven cereals of secondary importance not previously included under the same group in the 1911 census. The crops under "dry legumes" remained constant in both censuses. The 1911 census included only 9 classes under "vegetables," whereas the 1929 census schedule asked for more than 19 vegetables. The group of crops that has undergone a considerable change is the one under "industrial crops." The earlier census asked for only 6 classes. These were almost doubled in the 1929 census. The acreage of tobacco planted has been given considerable attention by the Statistical Office, chiefly because of the economic importance of this crop. About twelve varieties of tobacco have been added to the 1929 census schedule.

The group of "forage crops" has not undergone great change in the above classification of the acreage of crops planted, as shown by a comparison of the two schedules. A distinctive feature of the 1929 census is the method followed in its schedule, by which many of the classifications found in the 1911 census were eliminated. Many of the crops that formed separate classifications in the 1911 census were combined under one classification in the 1929 census schedule. This accounts for the large group of crops included under the single classification "other crops" in the 1929 census. This group included mostly such crops as olive oil, olives (for table use), bananas, figs, grapes for various uses, currants and other fruits. Of all these crops, vines, olives, and figs are of outstanding importance.

In the second section of the 1929 schedule is given the area of orchards exclusively occupied by fruit trees. The acreage of fruit trees scattered at random over the area of each farm is not included in the acreage of orchards. Such scattered trees are enumerated separately, and their production is recorded in a separate table, as provided in the schedule of 1929. The classification of these fruit trees is given in the section on "crop production," under "other crops." No provision is made in the census schedule for the acreage of multiple or intermittent crops.

As has already been stated above, the additions made to the 1929 census schedule with respect to acreage of crops planted are of considerable significance when compared with the entries made in the 1911 census schedule. Statistics on acreage of crops planted may be available now for various kinds of crops the acreage of which was unknown until the last census was taken. Even in the case of important crops, the acreage of which was reported annually by the statistical bulletins, there has been some improvement effected by the 1929 census.

The Greek schedule follows more or less closely the suggestions of the world census schedule in the classification of cereals, dry legumes, tubers and roots, industrial crops, and vegetables. Vineyards, olive trees, orchards, permanent meadows, and pastures, however, are classified in a different order. It is surprising, though, that vines and olives, two of the most important crops of the country, are not classed separately in the Greek census. Meadows and pastures are not included among the crops in the Greek schedule. In this table (acreage of crops and their production, table B of the Greek schedule) there are included, under the category of "forage crops," only two crops related to pastures and meadows; hay from meadows and clover. The first table of the schedule which is concerned with questions concerning land area, contains additional information about the acreage of meadows and pastures.

Two questions are asked:

1. The area of land in meadows that are harvested
  - (a) Natural
  - (b) Artificial (clover)
2. The area of land in pastures
  - (a) Arable
  - (b) Not arable

No other explanation is given about pastures and meadows. Fallow land is also included in the first table of the schedule under "farm area." From the schedule it appears that no information was asked concerning "sown land from which no crop was harvested in 1929 because of crop failure or destruction," a question suggested by the world census of agriculture.

The Hellenic schedule makes no provision for crops planted under the multiple crop system or companion crops. More information on such crops may be available after the results of the census are published.

The acreage of crops by groups and separately is given in Tables XV and XVI respectively.



Table XV. ACREAGE OF CROPS FOR THE YEARS 1860, 1911, 1914, 1919, 1924, and 1928

Year	Cereals		Dry legumes		Vegetables	
	(1)	Percent		Percent		Percent
	Area :in stremmas	of : total	Area :in stremmas	of : total	Area :in stremmas	of : total
					(2)	
1860	2,287,645	75.87	33,624	1.12	-	-
1911	5,760,821	66.63	456,075	5.28	212,425	2.46
1914	9,103,517	68.16	644,970	4.83	391,102	2.93
1919	9,601,911	69.10	589,839	4.25	250,448	1.80
1924	10,159,266	69.25	492,767	3.36	273,393	1.86
1928	11,389,948	71.63	499,739	3.14	283,362	1.78

Year	Industrial and aromatic products		Forage crops		Vineyards	
	Area	Percent	Area	Percent	Area	Percent
	in stremmas	of : total	in stremmas	of : total	in stremmas	of : total
			(2)			
1860	48,427	1.59	-	-	492,502	16.35
1911	344,339	3.98	299,063	3.46	1,010,314	11.68
1914	644,921	4.83	444,663	3.33	1,467,972	10.99
1919	528,290	3.87	323,356	2.33	1,782,406	12.83
1924	1,186,429	8.09	472,679	3.22	1,235,095	8.42
1928	1,247,228	7.84	507,936	3.20	1,316,651	8.28

(1) Unit of measure "stremma" equivalent to .247 of an acre.  
(2) There is no exact information available.

Table XV. ACREAGE OF CROPS FOR THE YEARS 1860, 1911, 1914, 1919, 1924, and 1928 (Continued)

Year	Raisins		Total
	Area	Percent	Area
	in stremmas	of total	in stremmas
1860	153,058	5.07	3,015,256
1911	562,874	6.51	8,645,911
1914	658,517	4.93	13,355,662
1919	808,748	5.82	13,894,998
1924	851,115	5.80	14,670,741
1928	656,624	4.13	15,901,488 <sup>(3)</sup>

(3) It does not include 72,790 stremmas the production of which was destroyed.



Table XVI. CULTIVATED AREAS OR ANNUAL ACREAGE OF EACH CROP  
(EXCEPT FRUITS FOR THE YEARS 1920 and 1927)  
(Stremma = 1/10 of a hectare = 1/4 of an acre)

Crops	(1)	(2)
	1920	1927
1. Wheat	4,356,349	4,988,979
2. Barley	1,563,166	1,883,689
3. Mixed grain	562,555	481,585
4. Maize	1,890,342	1,970,520
5. Oats	647,075	1,031,611
6. Rye	296,481	472,285
7. Beans (dry)	154,661	113,406
8. Lima beans	116,620	96,308
9. Chick peas	118,844	104,221
10. Lentils	39,373	45,880
11. Other dry legumes	112,557	172,773
12. Potatoes	104,227	108,588
13. Other vegetables	112,541	167,521
14. Tobacco	390,382	923,146
15. Cotton	70,275	145,811
16. Sesame	106,434	165,903
17. Anise	2,428	1,713
18. Other industrial products	1,110	8,607
19. Hay	277,509	422,280
20. Dry clover	40,884	110,161
21. Wine grapes	1,401,524	1,030,005
22. Table grapes	-	113,993
23. Currants (Corinth)	754,996	614,819
24. " (Sultana)	72,212	27,049
Total:	13,192,545	15,200,830

(1) Statistique Annuelle du Rendement Agricole, 1920-23.

(2) Statistique Annuelle Agricole de la Grèce, 1925-1927.

K. Livestock - Classification, Numbers and Amount

Sources listed in Part I are Recensement Agricole de 1911; Statistique Annuelle Agricole de la Grèce; Statistique du Commerce de la Grèce, années 1917, 1918, 1922; Annuaire Statistique de la Grèce, and Bulletin Mensuel de Statistique.

Another important source of information is:

Agricultural bulletin of the Hellenic Agricultural Society. (Vol. XVIII for March-October 1925) in Greek. Article by D. Syrakis, Inspector General of Agriculture, on the nomadic and other forms of stock raising in Greece (important for an understanding of the question).

Statistics on livestock in Greece are, in general, very defective. There are two main sources of information concerning the animal industry of the country: The agricultural census of 1911, and the annual agricultural bulletins issued by the director of statistics. The first detailed study of animal production in Greece was made by the agricultural census of 1911. This census included an enumeration of animals in Central Greece, Peloponnese, the Cyclades Islands, Arta and Thessaly (the territories composing Greece in 1911). Detailed statistics for Macedonia, Epirus, the Aegean Islands and Western Thrace are not available, as these territories were annexed after 1911. Since the annexation of the latter to Greece, the enumeration of animals in these new territories has been made on the basis of yearly returns published in the Statistique Annuelle du Rendement Agricole de la Grèce.

The census of 1911 obtained the statistical information on livestock through printed individual schedules which were distributed to the peasants by local committees composed of the communal authorities. The farmers were required to state the number of animals owned on the day of the enumeration, specifically the livestock on the farm, plough animals, and animals in herds grazing on lands owned by the farmer or on waste and mountainous lands belonging to the State.

The tabulation and classification of animals into classes and breeds was made by the Statistical Office itself. Under the term "animals and domestic birds" (bétail, oiseaux de basse-cour et ruches), the Statistical Office indicated all farm and domestic animals, poultry, rabbits, and bees. The census of 1911 classified such animals as oxen, buffaloes, sheep, and goats as "nomadic animals," i.e., animals usually grazing outside the home farm or farm lands, and without regular enclosed meadows or woodlands on which to graze throughout the year.

In the 1911 census (Part II) livestock was classified in three general tables: The first table shows the number of nomadic animals per



province, the amount of pasture and meadowlands in stremmas, and the corresponding number of stremmas per animal. The second table shows the proportion between the number of animals and the population. The third table classifies all animals according to sex and age. Analytical tables are also given by departments (prefectures).

The classification of animals according to species and breeds in the census of 1911 is given as follows:

- |                    |  |                      |
|--------------------|--|----------------------|
|                    | (Below 3 years                           | - males and females  |
| 1. Horses, total   | (Above 3 years                           | - " " "              |
|                    | (Horses in general                       | - " " "              |
| 2. Mules, total    |  |                      |
| 3. Asses, total    |  |                      |
|                    | (Below 1 year                            | - males and females  |
|                    | (  | males (bulls         |
|                    | (  | (other oxen          |
| 4. Oxen, total     | (Above 1 year                            | - females (milk cows |
|                    | (  | (other cows          |
|                    | (Oxen in general                         | - males and females  |
| 5. Buffaloes       |  |                      |
| 6. Camels          |  |                      |
| 7. Sheep           | (below 1 year                            |                      |
|                    | (above 1 year                            |                      |
| 8. Pigs            | (domestic                                |                      |
|                    | (foreign                                 |                      |
| 9. Goats           | (males                                   |                      |
|                    | (females                                 |                      |
| 10. Domestic birds | (chickens, geese, guinea fowls, turkeys, |                      |
|                    | (ducks, pigeons.                         |                      |
| 11. Rabbits        |  |                      |
| 12. Bees           |  |                      |

The 1911 census does not draw any definite line of demarcation between beef and dairy cattle. The cattle in Greece are for the most part of the general-purpose type. The lack of statistical data with

regard to cattle is due to the fact that the cattle industry in the country is very poor and undeveloped on account of the dry summer weather and the scarcity of pastures and meadows, which are essential to a well developed dairy or cattle industry. It is for this reason that sheep and goats are to be found in almost every part of the country while there are not enough cattle to meet the needs of the people.

The agricultural census of 1911 did not make any distinction between work animals and animals not employed in agricultural work. Such a distinction was made later by the annual statistical bulletins referred to below.

The census of 1911 was the last enumeration of animals made in Greece (save for the annual estimates) until 1929, when a new agricultural census was taken. Although the results of this census are not yet published, it is easy, from the schedule containing the questionnaire, to deduce the extent of the statistical information on livestock. The last part of the schedule shows the number of animals in the farmer's or stock raiser's possession at the date of the enumeration, and the animal production and values for the year 1929.

The agricultural census of 1929 makes the following classification:

- I. Horses, total
  - (below 1 year (males
  - ( (females
  - (
  - (from 1-3 years old (males
  - ( (females
  - (
  - (above 3 years (males
  - ( (females
  - (
  - (horses for breeding
  
- II. Mules, total
  - (below 2 years old
  - (two years old and above
  
- III. Asses, total
  
- IV. Oxen, total
  - (below 1 year - both males and females
  - (
  - (above 1 year - (oxen males
  - ( (cows ..... (milch cows
  - ( (other cows
  - (bulls
  
- V. Buffaloes, total



- VI. Sheep (below 1 year - both males and females  
(above 1 year - (males  
(females
- VII. Goats, total (below 1 year old - both male and female  
(above 1 " " (male  
(female
- VIII. Pigs, total (pigs below 6 months old  
(boars for breeding, 6 months old and above  
(sows  
(all other pigs
- IX. Poultry, total (chickens  
(turkeys  
(ducks  
(geese  
(guinea fowls  
(pigeons
- X. Rabbits, total (of domestic breed  
(of foreign breed
- XI. Bees, total (number of beehives (domestic  
(European  
(number of bees (domestic  
(European

The new schedule thus includes a larger number of questions and a more detailed report on the horses, sheep, goats, and pigs. Another improvement is in the information obtained concerning the number of animals used for breeding purposes. Before 1929 there was no exact information upon this point. The Greek schedule of animals followed, in general, the outline of questions and the recommendations made by the world census.

Whether the Statistical Office has already adopted a scale for the reduction of the various classes of animals to a unit basis is not known. There is no official study available on the breeds of Greek livestock. It is probable that no such study has ever been made. Neither the censuses of 1911 and 1929 nor the annual statistics since 1912 give any figures on the weight of the animals. The only figures available on weights are given in the section below on meat production.

The yearly enumeration of animals consists of estimates obtained from the communal authorities and published together with other statistical data in the *Statistique Annuelle Agricole de la Grèce*. The information

on livestock is collected on schedules which are sent to the mayors of the communes, who in turn appoint local committees for the enumeration of the animals. The peasants are only asked to state the number of animals in their possession, whether these are on their own farms, or pastures, or are grazing on common land in charge of a hired shepherd. Animals grazing on farms are, however, reported separately from those grazing on common lands. The individual bulletins, when completed, are sent directly to the Central Statistical Office. In 1926 the work previously performed by the mayors of the communes was transferred to the primary school-teachers\* who are now responsible for the enumeration of the animals in their communes. Each teacher has jurisdiction over his school district.

The Statistique Annuelle Agricole publishes only the total number of animals in the country, and the total numbers by territories and departments. No classification is made according to sex and age, except in the case of oxen and cows and horses and mares. The only other classification made in the Statistique Agricole is the division of the animals according to what they are used for.

The classification of animals for the years 1918, 1925, and 1928 is given as follows:

Kinds of animals	(1) 1918	(2) 1925	(3) 1928
1. <u>Plough animals</u>			
Oxen	( 329,352	356,051	361,783
Cows	(	126,108	133,680
Buffaloes	8,091	13,352	16,106
Horses	60,318	112,447	131,358
Mules	39,978	64,284	70,310
2. <u>Not employed in agriculture</u>			
Oxen	112,056	96,338	111,309
Cows	207,821	275,733	303,431
Horses	71,118	89,019	89,360
Mares	54,332	68,044	69,588
Mules	72,001	73,753	79,300
Asses	242,700	299,233	342,870
Buffaloes	-	22,881	28,574
3. <u>Other animals</u>			
Sheep	5,467,828	6,636,433	6,920,361
Pigs	365,074	451,561	418,524
Goats	3,472,749	4,103,136	4,919,118
4. <u>Domestic birds</u>	4,452,782	7,859,594	8,693,241
5. <u>Rabbits</u>	337,370	208,329	314,466
6. <u>Bees</u>	490,074	-	-

(1) Statistique Annuelle du Rendement Agricole, Grèce, 1918, 1919, 1920, 1921, 1922.

(2) Statistique Annuelle Agricole de la Grèce, 1925, 1926, 1927.

(3) Statistique Annuelle Agricole de la Grèce, 1928.

\*See Section N.



The above general classification of animals has been invariably given in all annual statistical bulletins since the census of 1911. Milch cows are included among animals not employed for agricultural work. The Statistique Annuelle Agricole does not give any statistical information concerning animals kept for breeding purposes. Asses, although not included in the first group, are often employed in various kinds of agricultural work. In the fourth group, under domestic birds, are included chickens, turkeys, geese, ducks, guinea fowls, and pigeons.

#### L. Ratio of Livestock to Land

#### M. Ratio of Livestock to Population and Agricultural Workers

The statistics available are not sufficiently comparable to warrant developing these two ratios in comparison with those of the United States.

#### N. Crop Yields and Production

Sources in Part I are Recensement Agricole de 1911; Statistique Annuelle Agricole de la Grèce; Annuaire Statistique de la Grèce, and Bulletin Mensuel de Statistique.

Another important source of information is:

Schedule of the agricultural census of 1929.  
Statistical Office, Greece.

The first official statistics on the yields and production of crops in Greece were given in the agricultural census of 1911. Most of the information, however, concerning crops planted in 1911 must be deduced from the tables in which these are classified according to the categories to which they belong, as this census does not contain a detailed discussion.

The following data were obtained for the most important crops:

1. Area planted (in stremmas).
2. Average production per stremma.
3. Total production in metric quintals.
4. Average price per metric quintal in drachmas.
5. Total value in drachmas.

These data have been summarized for each territory, and the percentage of Greece's total production of each crop grown in each territory determined. The unit of measure for the production of crops, including all classified products, is the metric quintal. Only the average production per stremma is shown in kilograms. The crops produced under the



multiple crop system are included in the tables showing total production and production according to departments and municipalities or communes.

Since 1911 the Statistical Office at Athens has estimated the acreage, yield, and production of important crops each year. These estimates are published in annual bulletins (*Statistique Annuelle Agricole de la Grèce*). The office collects this information directly from the municipalities and communes. It sends to the local authorities schedules which when filled in are returned to the Statistical Service.

The data invariably asked for each year by these schedules includes:

1. The area cultivated (in stremmas).
2. The average production per stremma in kilograms.
3. The total production in metric quintals.
4. The average value of the metric quintal.

Most of the information collected by the communal authorities consists of estimates. The available reports do not show exactly how these estimates are made. It is not known, therefore, whether the percentage change in acreage each year or a direct estimate of the acreage of each crop is reported. The basic unit until 1926 was the commune. There is no regular crop reporting service apart from the boards of the communes and local school teachers.

The duty of reporting these estimates of crop production was transferred in 1926 from the chairman of the communal boards to the local school-teachers. It was found that the latter were better qualified and more capable of handling statistical work of this kind than any other agency in the rural districts. The basic unit of information, therefore, became the school district. Each teacher is required to collect and submit the information according to instructions sent to him by the statistical service. In this connection we may explain that school-teachers in Greece are government servants; hence no additional expense is incurred by the Statistical Office. The collected figures on agricultural production are first verified by the Inspector of Agriculture of the department in which the commune is situated, and then transmitted to the statistical service for publication.

Considerable research work has been done by the office to test the reliability of the information collected by the communal authorities and teachers. The results of these inquiries have shown that, although the system is not entirely reliable, it nevertheless provides a fairly accurate picture of the actual conditions of agricultural production in the country from year to year.

Since 1926 a considerable change has been made in the classification of the data obtained concerning production. The figures represent a larger variety of crops, the data are tabulated more systematically, and new tables have been added rearranging the contents of those previously



published in such a way as to make the published reports simpler and easier to understand.

The classification of agricultural products recorded in the *Statistique Annuelle Agricole* for 1928 is almost identical with that of the agricultural census of 1911, (See Section J, p.76), and differs very little from the classification in earlier annual bulletins. Figures for the years 1918, 1920, 1927, and 1928 are given in Table XVII following.

The units of measure vary with the different crops. The official and commonly recognized unit of land measurement is the stremma (see Section H). The cultivated areas of all crops, which are grouped under the ten categories mentioned above, are always shown in stremmas in the publications of the *Statistique Annuelle Agricole*. The common unit of measure of production per stremma is the "oke," which is used in almost all parts of the country, while the indication of production per stremma by the "metric quintal" and "kilogram" is mostly confined to statistical calculations and tabulations of data as found in the agricultural census of 1911, annual bulletins, and other official publications.

The units of weight in use in Greece are the following:

1. The ton (French) equivalent to	1000	kilograms
2. The ton (English) " "	1016	"
3. The quintal " "	56.320	"
4. The oke " "	1.280	"
5. The dram " "	.0032	"
6. The pound (Venetian) " "	.480	"
7. The pound " "	150	drams
8. The coffin " "	24.064	kilograms*

The average yield of wheat in Greece in 1919 was about 60 okes per stremma, or about 75 kilograms per stremma. On the average, 15 kilograms (12 okes) of seed are sown per stremma. An ordinary yield is 75 kilograms, or a return of five to one. This is a general average for the provinces of Old Greece, but in many parts of the country places will be found where the crop is two or three times the average. Greece recently has adopted the world metric system for distances (meters, kilometers) and areas (stremma = 1/10 hectare),

The production of fruits in Greece plays an important rôle both in home consumption (olive oil serving as a substitute for butter in many parts of the country) and in the foreign trade of the country. The agricultural census of 1911 made an enumeration of fruit trees and fruit crops (Part III of the census). The trees are classified into three categories: (a) citrus group, (b) fruit trees other than citrus, (c) other trees (olive, mulberry, walnut, etc.)

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\*Varies with commodity weighed.

Table XVII. PRODUCTION OF EACH CROP FOR THE YEARS 1918, 1920, 1927, and 1928

Crops	(1)			
	Total production in metric quintals			
	(2)	(2)	(3)	(4)
	1918	1920	1927	1928
<u>Cereals</u>				
Wheat	: 3,734,677:	3,044,778:	3,529,942:	
Barley	: 1,580,325:	1,351,081:	1,583,088:	
Mixed grains	: 521,863:	395,108:	271,279:	
Maize	: 1,642,350:	2,038,030:	1,298,038:	
Oats	: 658,933:	607,807:	674,929:	
Rye	: 257,014:	262,780:	382,309:	
Total:	: 8,395,162:	7,699,584:	7,739,585:	7,858,425
<u>Dry legumes</u>				
Beans	: 59,383:	91,038:	47,966:	
Lima Beans	: 131,453:	91,368:	53,255:	
Chick peas	: 80,481:	70,206:	54,333:	
Lentils	: 31,111:	24,153:	16,277:	
Other legumes	: 184,865:	81,686:	96,518:	
Total:	: 487,293:	358,451:	268,349:	229,699
<u>Products from gardens</u>				
Potatoes	: 474,182:	498,211:	331,650:	
Other vegetables from gardens	: 1,220,685:	656,819:	725,682:	
Total:	: 1,674,867:	1,115,030:	1,057,332:	1,173,862
<u>Industrial and aromatic products:</u>				
Tobacco	: 303,512:	316,836:	632,165:	
Cotton	: 58,273:	44,494:	90,852:	
Sesame	: 16,862:	36,193:	34,613:	
Anise	: 980:	947:	703:	
Other industrial products	: 2,586:	660:	7,226:	
Total:	: 382,213:	399,130:	765,559:	741,992
<u>Forage plants</u>				
Hay	: 718,963:	920,840:	1,034,643:	
Clover	: 194,621:	156,460:	399,262:	
Total:	: 913,584:	1,077,300:	1,433,905:	1,467,387
<u>Vines</u>				
Must	: 3,173,856:	1,748,688:	2,270,120:	
Table grapes	: 227,073:	242,805:	334,523:	
Total:	: 3,400,929:	1,991,493:	2,604,643:	3,425,546
<u>Currants</u>				
Raisins-Currants	: 1,205,161:	1,251,940:	1,634,245:	
" -Sultanas	: 36,512:	121,051:	64,573:	
Total:	: 1,241,673:	1,372,991:	1,698,818:	1,706,902
Olive oil	: 956,674:	1,430,688:	724,026:	1,000,711
Olives	: 175,962:	392,026:	148,264:	490,494

(1) Metric quintal = 100 kilograms.

(2) Statistique Annuelle du Rendement Agricole, 1918, 1920.

(3) Statistique Annuelle Agricole de la Grèce, 1927, 1928.

(4) Annuaire Statistique de la Grèce, 1930.



Since 1911, the Statistique Annuelle Agricole has recorded year after year the production of fruit crops under the following three classes:

1. Citrus fruits.
2. Pomiferous fruits (apples, pears, etc.).
3. Other tree crops (almonds, walnuts, chestnuts, etc.).

The annual agricultural bulletins do not make an enumeration of the fruit trees. They simply record the annual production in tables showing: (a) the total production of each kind of fruit per year, (b) the average value of fruits per unit, and (c) the total value in drachmas. Table XVIII following gives figures for the years 1920, 1924, and 1928.

The production of fruits is recorded according to two units of measure. The citrus fruits (lemons, oranges, citrons and tangerines) are recorded by the Statistical Office in thousands of pieces (by a piece is meant one lemon, one orange, etc.) The production of all other fruits is indicated according to metric quintals.

The agricultural census of 1929 which has just been completed makes a detailed study of fruit production in the country. The schedule provides two tables for recording the fruit crop produced in 1929.

In the first table (the general table which includes the production of all crops in the country), the enumerators were asked to record the production of fruit orchards only, such as figs from fig plantations, olives from oliveyards or other orchards planted with trees of a single kind. The second table contains the production of fruit trees not included in orchards but scattered over the farm area. In this way, the Statistical Office expects to obtain information concerning both the acreage of fruit trees and the total fruit production for the country.

The classification of fruit crop production, as it appears yearly in the Statistique Annuelle Agricole, compares with the schedule of the agricultural census of 1929 as follows:

<u>Annual Agricultural Statistics</u>				<u>Agricultural Census of 1929</u>				
	<u>Unit of measure</u>				<u>Unit of measure</u>			
Lemons	(in thousands of pieces)			I. Citrus trees	(in thousands of pieces)			
Citrons	"	"	"	Lemon	"	"	"	"
Oranges	"	"	"	Citron	"	"	"	"
Mandarines	"	"	"	Orange	"	"	"	"
Apples	(in metric quintals)			Mandarines	"	"	"	"
Pears	"	"	"	Nerangies"	"	"	"	"
Figs (dried)	"	"	"	Frappes	"	"	"	"
Chestnuts	"	"	"					
Almonds	"	"	"	II. Fruit trees (Production in okes)				
Walnuts	"	"	"	Pear-apple trees	"	"	"	"
Carobs	"	"	"	Peach-apricot	"	"	"	"
Acorns	"	"	"	Cherry-sour cherry"	"	"	"	"

(continued)

(Continued)  
Agricultural Census of 1929

	<u>Unit of measure</u>		
Plum-quince trees	(Production in okes)		
Fig-nut	"	"	"
Banana	"	"	"
III. Other trees	"	"	"
Mulberry-olive- chestnut trees	"	"	"
Walnut-almond- carob trees	"	"	"
Hazel-nut	"	"	"

The "units" in this table, designed for the enumeration of fruit production only, are changed in the final classifications into "thousands of pieces" and "metric quintals" respectively. The schedule asks for the production per each kind of tree, and the value of the production. The production of small fruits is shown in the first table of the schedule under orchards, in which is asked the acreage in stremmas, the production in okes, and the total value of the fruit crop produced.

The schedule of the World Agricultural Census proposed for fruit production the following five classifications of fruit trees and their products:

.....k. Vineyards	3	classes	
1. Oliveyards	2	"	
m. Orchard fruits and nuts	18	"	
n. Small fruits cultivated	1	"	with more subclasses
o. Miscellaneous plantations (coffee, tea, etc.)	11	"	

The Greek schedule, as explained above, does not follow the recommendations of the world census in that the small fruits are put under one group with the oliveyards, vineyards, and other fruit orchards.

0. Ratio of Crop Production to Livestock

For a discussion of this ratio, see the publication in the series on Switzerland, Section O.



Table XVIII. FRUIT PRODUCTION AND VALUE OF FRUIT PRODUCE FOR THE YEARS 1920, 1924, and 1928

	(1)	(1)	(2)	(2)	(3)	(3)
	1920	1920	1924	1924	1928	1928
Fruit produce	Production in thousand pieces	Value in drachmas	Production in thousand pieces	Value in drachmas	Production in thousand pieces	Value in drachmas
Lemons	108,676	3,798,160	57,430	11,892,688	53,662	20,661,823
Citrons	8,233	1,247,900	3,051	15,066,314	5,939	21,244,741
Oranges	167,478	9,507,298	77,436	19,215,326	64,901	29,404,673
Tangerines	176,401	8,145,532	82,467	9,676,659	60,887	20,411,574
	Production in metric quintals		Production in metric quintals		Production in metric quintals	
Apples	28,589	2,210,292	36,510	7,496,334	18,155	7,375,075
Pears	72,311	5,485,370	76,354	11,331,629	142,559	29,751,999
Figs(dried)	197,654	14,758,236	196,400	57,287,156	186,419	78,757,260
Chestnuts	51,484	3,790,092	44,831	7,234,325	50,837	13,304,548
Almonds	65,249	9,961,689	46,442	32,320,749	28,012	29,377,559
Walnuts	-	-	36,841	22,098,246	27,956	26,007,802
Carobs	229,697	6,773,272	225,501	16,690,601	220,044	29,586,585
Acorns	51,497	1,328,892	79,734	9,649,778	102,559	22,283,733
Nuts	-	-	-	-	-	-

- (1) Statistique Annuelle du Rendement Agricole, Grèce, 1918-1924.  
 (2) Statistique Annuelle Agricole de la Grèce, 1927.  
 (3) Annuaire Statistique de la Grèce, 1930.

## P. Livestock Production

Part I lists as a source Bulletin Mensuel de Statistique. Another important source is the Schedule of the agricultural census of 1929. Bureau of Statistics, Greece.

Statistics on animal products are entirely unsatisfactory. The known statistical literature with regard to livestock in Greece is devoid of any information or figures concerning the production of animal products. Neither the agricultural census of 1911 nor the annual statistical bulletins since that year have published any data on production.

The Bulletin Mensuel du Commerce Spécial de la Grèce, as well as the annual publication concerning Greek commerce, gives a detailed list of the imports and exports of the animal products of the country.

The Bulletin Mensuel de Statistique gives the number of animals slaughtered in the slaughterhouses of 26 cities in Greece and the quantity of meat obtained per month. The data on slaughtered animals are collected by the Veterinary Service of the Ministry of Agriculture, and the statistics are communicated to the Statistical Office for publication. The table contains information on three species of animals: First, the bovine species, with no discrimination between cows and oxen or calves; second, sheep and goats combined in the same column; and third, pigs. The weight is recorded in kilograms, but no average weight of slaughtered animals is given. The figures of slaughtered animals quoted in the Bulletin Mensuel de Statistique represent the amount of meat consumed, as reported regularly for only 22 cities, besides reports for certain months only given for three or four other cities. These cities are among the largest in the country. Whether the Statistical Office tries to compare these figures for slaughtered animals with the statistics of animals produced and imported is not apparent from the published reports. There are no figures of animals slaughtered on farms or in villages. Neither are there any statistics on poultry production and dairy products.

The agricultural census of 1929 made the first official study of animal products. The results of this census are not yet available, but the questions that were inserted in the schedule distributed to farmers are classified as follows:

### I. Dairy products.

1. Amount of milk produced in 1929 (from cows  
(from other animals)
2. Total amount of butter produced in 1929
3. Amount of cheese produced in 1929 (hard cheese  
(soft cheese)





### S. Ratio of Agricultural Production to Land

A discussion of this ratio will be found in the report in this series on Switzerland, Section S..

### T. Forest Products

Sources listed in Part I are Bulletin Mensuel de Statistique, and Annuaire Statistique de la Grèce.

The important other sources of information are as follows:

Annual Bulletin of Forest Products and Revenues of the Forests of Greece, 1925, 1926, 1927, and 1928. Bureau of Forests, Ministry of Agriculture, Greece.

The Public Forests of Greece. Ministry of Agriculture, Athens, 1929.

Statistics relative to the forest products of Greece may be found in the Annual Bulletin of Forest Products and Forest Revenues, published by the Bureau of Forestry in the Ministry of Agriculture. This publication is the only known source of information on the production of publicly and privately owned woods and forests in Greece. It is published annually by the Bureau, but no explanations are given in the current issues as to previous publications of the series. Data are available for the years 1926, 1927, and 1928. These bulletins refer merely to the exploitation of the forests, and give the quantities of each kind of timber felled and the Government dues collected thereon.

There are the following five tables showing:

- I. The forest products for the year and the Government dues collected thereon by regional forestry offices.
- II. A general table, as above, giving the total for the country as a whole.
- III. The nontaxable forest production for the year.
- IV. Expenses of the forestry service.
- V. The imports and exports of forest products.

The first table, which occupies almost the whole of the bulletin, shows the various kinds of timber, etc., felled during the year in each of the 118 forestry regions. These regions are divided, according to the extent of the areas supervised, into first, second, and third class. The



number of kinds of forest products derived from the exploitation of forests is shown for each region and varies from 16 to 22, according to the size and productivity of the place. From the point of view of the exploitation of forest lands, forests are classified in two categories:

1. Public forests.
2. Private forests and estates.

The term "estates" refers to areas of woodland which are included in farms. Each category is subdivided to show: 1) the quantity of forest products, 2) the royalties paid (in the case of public forests) or the dues paid (in the case of private forests).

A second table gives the total timber production per year, classifying the forest products as follows:

A. Main forest products.

1. Timber from oaks, pines, beech trees, and others.
2. Firewood and pine plantations.
3. Extracts of forest products, such as resin, lime, charcoal, etc.

B. Secondary forest products.

1. Roots and plantations for tanning or dyeing.
2. Timber slabs, acorns, chestnuts, etc.
3. Receipts from sales of forest products, dues, taxes, etc.

The unit of measure in forest production varies according to the product. Thus for oak, pine, beech trees, and similar wood, the common unit of measure is the cubic meter; for firewood the "zygion,"\* or load, for lime the metric quintal, and for the extracts from forest products, such as resin, roots, charcoal, etc., the oke, which is in common use throughout Greece. On account of the various units in use for measuring the production of wood, the statistical bulletin does not give the total for production of forest products as a whole but only for each of the recorded kinds.

No data are available for estimating the production per hectare or stremma. The bulletin does not contain any information on yields per

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\* 1 zygion = 100 okes. One oke = 1.280 lbs.

hectare or per tree. The Annual Bulletin of Forest Products and Forest Revenues is principally concerned with the revenues from forest production and expenses for officers and employees in the forestry regions and forestry schools.

A volume published by the Ministry of Agriculture in 1929 (The Public Forests of Greece) gives statistical details concerning the number, location, and area of state forests, the kinds of trees and the quantities of forest products produced annually, with maps and graphs.

### U. Fisheries

The only important source of information is Monthly Bulletins of Open-Sea and Lagoon Fishing. Bureau of General Statistics. Ministry of National Economy, Greece.

Statistics on fisheries are available only for the last two years, because the inquiry on fisheries did not start until 1928, when, for the first time, the Bureau of Statistics began to keep official records. The Bureau does not publish any special bulletins or reports on fisheries. The information given here is taken from the individual monthly schedules used by the fishermen in recording their catch of fish.

The Bureau of Statistics distinguishes three kinds of fishing:

1. Open-sea fishing.
2. Fishing of sponges.
3. Fishing in lagoons (artificial fishing-grounds).

For the collection of information on "open-sea fishing," the port officers all over the country are instructed to supply each fishing boat with a monthly schedule, to be filled in by the fishermen, which is divided into three parts, each representing a period of ten days. In separate columns are shown the kinds of fish caught, the quantities (in okes), and the territory in which they were caught. At the end of the month the bulletin is returned to the harbor master's office, from which all bulletins are sent to the Bureau of Statistics for tabulation. No provision is made for recording the prices of fish caught in the open sea.

The information on sponges is obtained in this same manner. The Bureau distinguishes three qualities of sponges. The schedule asks the local average gross value for each of the three qualities of sponges, the duration of the sponge fishing period, etc.

Statistics on fishing in lagoons or "ichthyotropheia" which are special breeding places for fish are collected from local revenue offices through individual schedules distributed to fishermen every month. No explanation is given regarding the ownership of these lagoons. From the bulletin it appears that they belong to the state, and that they are



rented to private contractors. Every person renting a lagoon is asked to fill in a report each month, indicating the following items:

1. The kinds of fresh water fish caught (by name)
2. The kinds of sea fish " " "
3. Other marine products " " "

For each of these classes, the quantity is given in oke. In separate columns of the bulletin, the average price per oke is given for fish distinguished as small, medium, and large-sized, and also the total value for each kind of fish. Other columns give the weights of the smallest and of the largest fish caught, and the hatching stage at which they were caught.

The data on number of lagoons, their extent in stremmas or hectares, the classes of fish, and the quantities caught in the last two years may be secured from the Director of fisheries at the Ministry of Agriculture or from the Bureau of General Statistics of the Ministry of National Economy.

#### V. Food Production and Consumption in Relation to the Population

The data necessary for the discussion of this topic are not available for Greece. The best that one can do is to compile estimates on the basis of the 1929 census of production and the data of imports and exports discussed in Section Z.

#### X. Timber Production and Consumption in Relation to Population

The data necessary for a discussion of this topic are not available for Greece.

#### Y. Budgets of Farm Families and Urban Families

The source of information is as follows:

Official Journal of the Greek Government or (Efimeris tis Kyverneseos) no. 361, Athens, September 28, 1929.

The first study of farm and urban family budgets ever made in Greece was started in the early part of 1930. This study makes an inquiry into the budgets of workers' families in 26 urban centers and in one agricultural district. The report does not indicate whether the study of

family budgets in the rural section will be confined to farm laborers' families or not.

This inquiry will last for a period of twelve months, and will include about five hundred families, located in different parts of the country. The results will be used mainly for the calculation of the index number of cost of living.

According to the report of the Bureau of Statistics, the study of family budgets will endeavor to ascertain:

1. The income of the families.
2. The household expenses.

The household expenses are subdivided into five categories:

1. Expenses for food.
2. " " housing.
3. " " clothing.
4. " " fuel, lighting and cleanliness (soap etc.)
5. " " other useful articles.

The method by which the study of family budgets is being carried out consists in providing printed schedules in which are outlined in detail the items in each of the above categories. These schedules, numbered so as to be combined into booklets, are distributed each month to the families that have agreed to keep an account of their expenses. Each party is expected to enter in the schedule the daily expenses and the income for each month.

The personnel employed for this special research work consists of inspectors who are in constant touch with the families keeping records of their expenditures. On the first of each month the inspector collects the booklets distributed the previous month and hands out new booklets. The inspectors make daily visits to the families, examining the records and assisting them in keeping accurate records of expenditure.

The schedule is divided into six parts. The first part asks for the persons composing the family, the ages, occupations, and monthly salary of each working member of the family, each item being entered in a separate column. The rest of the schedule deals with the categories outlined above. The group dealing with food expenditure is made up of 51 articles, and includes the most important and essential food products required for consumption in the home. The daily amounts paid for each are shown in separate columns. The section on clothing includes six items relating to clothing expenditure for women, men, and children.

As the inquiry is still proceeding, no data are available for further consideration. What units will be adopted in the calculation of the results of this inquiry the report does not mention. For further



explanation of the items of the schedule, see the Official Journal no. 361, September, 1929.

### Z. Imports and Exports of Farm Products

Sources listed in Part I are Commerce de la Grèce avec les Pays Étrangers, or, as it was called later, Statistique du Commerce Spécial de la Grèce; Annuaire Statistique de la Grèce; Bulletin Mensuel du Commerce Spécial de la Grèce avec les Pays Étrangers; Bulletin Mensuel de Statistique; Tableau du Mouvement du Commerce; and Statistique du Commerce Extérieur de l'île de Crète.

General statistics on the imports and exports of Greece were first recorded systematically in 1882. In that year was organized the Statistical Bureau of Imports and Exports, in connection with the Ministry of Finance. Its purpose was to classify statistical information concerning the trade of Greece. The Bureau functioned successfully, except for an interruption in 1885, until 1917 when it was merged with the Statistical Bureau set up in the Ministry of National Economy.

Before the organization of the statistical service on imports and exports in 1882, data on the imports and exports of Greece were collected until 1861 by a bureau in the Ministry of Finance, and from 1862 to 1882 in another bureau of the same ministry. Both these bureaus compiled tables showing not only the general and special commerce of Greece with foreign countries, but also the various articles of trade, and the country from which they came as well as the destination, tariff revenues, and movements of shipping.

General commerce includes both imports and exports. The general commerce of Greece consists of all commodities imported into the country from foreign countries, either for home consumption or in transit, and all native and foreign commodities exported from Greece. The special commerce includes imports of commodities for home consumption, and exports of all native products and commodities to foreign countries, plus foreign products which had been nationalized by the payment of customs duties.

From 1882 to 1899, all commodities were divided into six general divisions, which in turn were subdivided into two categories each, and these were subdivided again into 364 classes for imports and 130 classes for exports.

The values of the commodities imported and exported were fixed by a special committee appointed by the Ministry of Finance. This committee drew up a table of definite prices, including the average price of each class of products and commodities in gold currency, approximately estimated.

From 1899 to 1920, the Bureau of Statistics included in its tabulations only the special commerce of Greece. The system of dividing foreign



commerce into general and special is not obligatory by international agreement, nor is it universal among the principal countries of the world. The system prevails in France, Italy, Belgium, Switzerland, etc., but not in the English-speaking countries. Other countries in the Near East have abandoned the old system and adopted the one-phase commerce system in use in England and the United States. The trade of these countries is usually divided into three large categories: First, foreign commodities imported into the country; second, native products and commodities, or products merged with these, exported to foreign countries; and third, foreign commodities imported into the country and re-exported. In such cases, there is usually an analytical description of the movement of the commodities in transit.

The Bureau of Statistics found the new system to have many advantages. The transit commerce of Greece was gradually declining at the time, and the figures for the general commerce were almost identical with those for the special commerce, so that the column for general commerce in most of the commodities was but a useless repetition of the figures for special commerce. To prevent any misunderstanding as to the trade of Greece due to the absence of figures for general commerce in the statistics of the newly adopted system, the Bureau found it advisable to enlarge and develop the analytical tables of the transit commerce of the country, and these tables finally replaced the figures for general commerce.

Later in 1918 the Bureau also abandoned the permanent statistical values of commodities as fixed by committee many years ago. There were substituted variable average prices fixed by a special committee set up at the Ministry of Finance. The old values had come to differ so widely from the actual current prices that the values of imported or exported products, estimated in gold drachmas and inserted in the published bulletins, were found in very many cases to misrepresent entirely the amount of gold exported by Greece to meet payments of imports, or gold imported in exchange for Greek products exported to foreign countries. This special committee consisted of eighteen members, composed of high officials and representatives of the Athens and Piræus Chambers of Commerce and Industry. As to the value of imported goods, it was decided by the Committee to take as their value the average value on arrival in the different customhouses, without regard to the countries from which the commodities or products were shipped. The customs duties and the transportation and other expenses from the customhouses were not included in the average value of the commodities. The value of exported goods was regarded as the average value in the interior of the country plus the expenses incurred for transportation to the customhouse.

It is on the basis of these values that the values of commodities have been calculated in the statistics of imports and exports beginning with the year 1918.

Beginning in 1921 Greece went back to its old practice of including in the statistics of imports and exports both the general and special commerce of the country. Since 1921 the following publications have been



issued by the Director of the Statistical Service in the Ministry of National Economy. These explain the general method used in recording the imports and exports.

1. Statistics of the commerce of Greece with foreign countries. This is an annual publication, divided into two parts. The first part contains tables of imports and exports in the general and special commerce of Greece, according to countries, customhouses, and categories of commodities. The second part contains analytical tables: (1) of the special commerce of Greece with foreign countries, showing amounts and kinds of exported commodities; (2) of the movement of the bonded warehouses, indicating the kind and category of imported and exported commodities in the warehouses; and (3) of the direct transit commerce of commodities traversing the country for a foreign destination.

2. A monthly bulletin of the special commerce of Greece with foreign countries. This bulletin contains statistical information of the foreign trade during the preceding month. Besides the general tables the bulletin includes many analytical tables showing the amount and value of the imported and exported commodities according to their destinations and the countries from which they came.

No change was made in the classification of commodities in 1921. All commodities were classified by the Statistical Office, on the basis of the old tariff, into 20 categories which included 365 classes divided into 1202 subclasses. The classification includes the following groups of agricultural significance:

- Live animals in general.
- Products of animal industries.
- Products of fishing in general.
- Agricultural products in general.
- Olives and oily substances in general.
- General forestry products.
- Hides, and animal and fish bones.
- Furniture and other objects made of wood.
- Candy products, confectionery, and various foodstuffs.
- Wines and alcoholic products.
- Paper and its industrial products.
- Products of hemp, felt, and straw.

Import and export figures for the first five classes for 1922 are given in Table XIX following.

Since 1919 all commodities have also been put into three large groups, according to their nature and use, as follows:

1. Live animals and other food products.
2. Substances useful in industry.
3. Manufactured products.

Table XIX. IMPORTS AND EXPORTS OF AGRICULTURAL PRODUCTS, 1922\*

Commodities	Imports			
	Quantity (kilograms)		Value (in drachmas)	
	General	Special	General	Special
<u>Live animals in general</u>				
Oxen, cows, horses, mules, sheep, pigs, miscellaneous	(1)(2) 128,638	(1)(2) 128,638	43,131,185	43,131,185
<u>Animal products in general</u>				
Milk, meats, cheese, butter, hides, grease, eggs, miscellaneous	23,242,086	19,179,299	127,131,480	62,243,451
<u>Products of fish</u>				
Fresh fish, fish pre- served, caviar, oysters, sponges, miscellaneous	11,486,821	10,115,392	79,644,755	66,391,735
<u>Agricultural products in general</u>				
Cereals: Wheat, corn, barley, etc., flour, fodder, leguminous crops, vegetables, fruits, spices, raisins tobacco, cotton, flowers, industrial crops, miscellaneous	625,815,475	455,188,513	1,701,368,099	1,253,149,799
<u>Olives and oily sub- stances</u>				
Olives, sesame, cotton seed, other oily sub- stances	12,425,257	10,144,151	29,330,951	18,724,695

\*Statistique du Commerce Spécial de la Grèce, 1922.

(1) Birds not included; they are given in kilograms. The figure, for both general and special, is 1458.

(2) Head.



Table XIX. IMPORTS AND EXPORTS OF AGRICULTURAL PRODUCTS, 1922\*  
(Continued)

Commodities	Exports			
	Quantity (kilograms)		Value (in drachmas)	
	General	Special	General	Special
<u>Live animals in general</u>	:	:	:	:
Oxen, cows, horses,	:	:	:	:
mules, sheep, pigs,	(2):	(2):	:	:
miscellaneous	144:	144:	78,400:	78,400
<u>Animal products in general</u>	:	:	:	:
Milk, meats, cheese,	:	:	:	:
butter, hides, grease,	:	:	:	:
eggs, miscellaneous	15,384,166:	9,923,270:	97,603,953:	44,735,953
<u>Products of fish</u>	:	:	:	:
Fresh fish, fish pre-	:	:	:	:
served, caviar,	:	:	:	:
oysters, sponges,	:	:	:	:
miscellaneous	986,497:	140,895:	8,557,065:	2,259,803
<u>Agricultural products in general</u>	:	:	:	:
Cereals: Wheat, corn,	:	:	:	:
barley, etc., flour,	:	:	:	:
fodder, leguminous	:	:	:	:
crops, vegetables,	:	:	:	:
fruits, spices, raisins	:	:	:	:
tobacco, cotton,	:	:	:	:
flowers, industrial	:	:	:	:
crops, miscellaneous	167,375,427:	154,223,447:	1,969,927,766:	2,018,863,018
<u>Olives and oily substances</u>	:	:	:	:
Olives, sesame, cotton:	:	:	:	:
seed, other oil sub-	:	:	:	:
stances	32,927,118:	30,865,010:	150,509,650:	138,595,703

\*Statistique du Commerce Spécial de la Grèce, 1922.  
(2) Head.

The quantity of imports and exports is generally by weight. The customs authorities record each month the quantity of the commodities according to the unit of measure used for the application of the tariff. Upon receipt of this information the Bureau of Statistics is in a position to indicate the fluctuations in the values of the commodities, if there are any, and the decrease or increase of the commerce. Such calculation becomes much easier if the weights of the commodities are taken into consideration.

In the imports of commodities are shown: (1) the gross weight for such commodities as drugs, ready-made clothes, razors, dyes, etc., (2) the legal net weight for all other commodities, deduction being made only for liquids according to certain provisions fixed by law; and (3) the real net weight, the weighing taking place only at the request of the receiver of the commodities.

For exports only the legal net weight of the commodities is shown.

Until 1918 the quantities of the commodities were quoted in okes.\* Since then they have been quoted in kilograms (excepting such commodities as are taxed by heads, pieces, pairs, dozens, etc., the quantity of which is represented by figures expressing the number of heads, pairs, dozens, etc.).

The custom duty per unit of imported or exported commodities is shown in the analytical tables of the Annual Statistical Bulletin of the Commerce of Greece.

In order that the information as to imports shall be consistent the Statistical Office has constructed an analytical table for imports on the basis of the existing tariff regulations. The various customhouses in Greece are required to keep special statistical books for all imports. At the end of each month the officers in charge of the customhouses are required to record in these special analytical tables all commodities imported during the month according to their category and class, whether they are subject to duty or are imported duty free. In another special column is shown the original country from which the commodities were exported, the quantity and value of commodities imported for direct consumption, the quantity and value of commodities reported as in transit, the total quantity and value of commodities in bonded warehouses, and the duties collected on imports.

As regards exports, the customhouses are required to fill in an analytical table at the end of each month, giving, under separate columns, the categories and classes of exported commodities, whether these are dutiable or duty free, and the dutiable products shipped from one part of the country to another.

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\* 1 oke = 2.828 lbs.



In other columns are indicated the place of destination, the flag under which the commodities are exported, the value and quantity of commodities exported directly from the customhouses as well as of those in transit, the total quantity and value of commodities exported through customhouses and transit warehouses, the land tax (collected on certain products, e.g. oil and raisins, at moment of export), and export duties on commodities exported or in transit.

From these records the Central Statistical Office of the Ministry of National Economy prepares the quarterly and annual reports. The annual statistical bulletin is written on the basis of the four quarterly bulletins. In the annual bulletins are indicated, for each class of commodities, the countries from which they were imported, the quantity imported from each country, the value of the commodities and the duties collected. The same items are shown for exported commodities.

A'. Commercial Fertilizer: Production,  
Imports, and Exports

Sources listed in Part I are, Statistique du Commerce Spécial de la Grèce, and Bulletin Mensuel de Statistique.

The important other sources of information are as follows:

Production et Consommation des Engrais Chimiques dans le Monde. Institut International d'Agriculture. Bureau des Renseignements Agricoles et des Maladies des Plantes.

Mears - Greece to-day, 1929. (Former American Trade Commissioner to Greece).

Cyril Hopkins - How Greece Can Produce More Food. Agricultural Experiment Station, University of Illinois. Bulletin No. 239, 1922.

Statistical data with regard to the imports and exports of commercial fertilizers are contained in the monthly statistical bulletins of the General Statistical Bureau of the Ministry of National Economy, under the heading Imports and Exports of Principal Commodities. Chemical fertilizers are also manufactured locally by the Company for Chemical Products and Manures at the Piraeus. The figures of the local production are given in the same bulletins under Industry.

The Ministry of Agriculture in Greece, in order to encourage the Greek chemical fertilizer industry of the Piraeus, and at the same time

popularize the use of fertilizers, established in Athens in 1915 a Service of Fertilizers, the duties of which consist of a close supervision over the manufacture and composition of the chemical and organic fertilizers. This office has established branches in the most important towns of the country. The information obtained regarding the production and distribution of fertilizers is communicated to the Ministry of Agriculture and Bureau of Statistics. The national consumption of fertilizers in 1911 and 1916 was 200 and 6,600 tons respectively. A comparison of the figures of imports, exports, and local production would indicate that the local consumption is now well above 50,000 tons but below 100,000 tons. According to statistics of the General Statistical Bureau, the local production of fertilizers for the year 1929 was 102,002,000 kilograms of which 57,113,000 kilograms were superphosphoric fertilizers and 44,889,000 kilograms were compound fertilizers.

In the same year Greece exported 29,009,493 kilos of chemical fertilizers and imported 15,798,858 kilos. Data on the production of superphosphates may be obtained directly from the Company for Chemical Products and Manures, established in Piraeus.

The bulletin, How Greece Can Produce More Food, published in 1919 by Dr. Hopkins of the Agricultural Experiment Station of the University of Illinois, gives a complete soil analysis of Greece, quantities of the existing elements of potassium and limestone in the country, artificial fertilizers to be used for soil improvement, and much other useful information relating to soil fertility.

The International Institute of Agriculture, Bureau of Agricultural Instruction and Researches on Plants, published in 1913 statistics on the world production and consumption of fertilizers, but these are out-of-date as regards Greece because since then both the production and consumption of artificial fertilizers in Greece have greatly increased. The Institute, quoting from the Foreign Commerce of Greece in 1910, gives the following figures for imports:

1. Fertilizers	7,991 quintals
2. Chloride of Potash	1,598 "
3. Nitrate of Potash	3,826 "

Figures of exports are not given, but the Institute's report states that there were certain exports of bones to Austria and Italy. The data on the quantities of fertilizers consumed in Greece were reported to the Institute from the Ministry of National Economy.

With regard to the imports and exports of commercial fertilizers, the information concerning the countries from which they are imported or to which they are exported appear in the customs returns. According to tariff regulations, the fertilizers are classified under the category of animal products. The customhouses report to the Bureau of Statistics each



month the amount of fertilizers imported and exported. The Statistical Office publishes the information in the quarterly and annual statistical bulletins indicating the countries importing from or exporting to Greece, the amount of the imported or exported product, and its value in drachmas per kilogram. Both imports and exports of commercial fertilizer are free of duty in Greece. The office does not indicate the kinds of fertilizer, nor does it differentiate between organic and chemical fertilizers.

The principal countries from which Greece imports commercial fertilizers are Egypt, Belgium, Germany, United States, and Great Britain. The principal countries to which she exports domestic fertilizers are Egypt, Italy, Cyprus, Great Britain, and Turkey.

### B'. Power on Farms

Part I lists as sources Statistique Annuelle de la Grèce; Recensement Agricole, and Statistique du Commerce Spécial de la Grèce.

Other sources of information are as follows:

Industrial census, 1920. Ministry of National Economy.  
Bureau of Statistics, Athens, Greece.

Agricultural bulletin of the Hellenic Agricultural Society  
(in Greek).

Statistics with regard to power used on farms in Greece are not available. The Bureau of Statistics is at present making a first inquiry into power used on farms, but the statistical data, being still incomplete, have not yet been published.

The agricultural census of 1911 and the annual statistical bulletins published since then do not give any statistical details concerning power used in farming enterprises. Animals constitute the principal form of power on farms throughout the country, especially in mountainous parts and places to which modern machinery is not adapted.

The Bureau of General Statistics, in the yearly agricultural bulletins, classifies as plough animals the following:

Oxen	361,783
Cows	133,680
Buffaloes	16,106
Horses	131,358
Mules	10,730

The above figures represent the number of animals employed in agricultural work, ploughing, etc. Donkeys, which are much employed on Greek farms, are not counted as plough animals, probably because they are not

directly employed in agricultural work. The number of donkeys in 1928 was given as 342,870. Nearly all peasants own donkeys which are used principally for purposes of transport.

The Greek peasant is still rather backward as far as the use of modern implements is concerned. In 1929, there were still more people using wooden ploughs than iron ones (286,534 as against 241,548).<sup>\*</sup> Occasionally, however, Greek villagers have cooperative societies for the purchase of such commodities as fertilizers, seed, machinery, etc. There are a few cases where steam ploughs are owned cooperatively.

The Agricultural Society (formerly Royal Agricultural Society) for many years has been intrusted by the government with the duties of supplying information and machinery to the peasants. In the monthly publications of this society are shown the kinds of agricultural machinery used in the various parts of the country, but these are not official data.

The industrial census taken in 1920 contains some information regarding factories in Greece which manufacture simple agricultural implements such as ploughs, harrows, hay-pressers, grape-presses, etc. These, besides meeting the domestic demand, are also exported to neighboring countries (Egypt, Turkey, etc.).

The Statistique Annuelle du Commerce Spécial of recent years gives the imports of various kinds of the more expensive and large-sized agricultural implements such as reaping machines, threshing machines, and self-binding harvesters. These are usually employed only where large-scale farming prevails.

The agricultural census of 1911 and the annual agricultural bulletins published since then do not give any information concerning agricultural machinery used on Greek farms. The agricultural census of 1929 made the first inquiry into farm implements and machinery used by the peasants. This census complies with the recommendations made by the world census for the year 1930, and goes even further in making a more detailed inquiry into agricultural machinery. The inquiry applies to fourteen kinds of implements and machines, giving the numbers used, and in some cases the place of manufacture, type, etc.

Recently there has been established in the Ministry of Agriculture a Service for Agricultural Machinery to deal with this particular problem. It is probable that this office will in the future be the best source of information on agricultural machinery.

Data on other forms of power, such as electric and water power used on farms are not available. The census of 1929 does not include them in its questionnaire as given above. Waterpower is much in use, both for industrial and agricultural purposes in Western Macedonia, but detailed information on this point is not available.

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\*Agricultural census of 1929.



There is still very little artificial irrigation in Greece, except by "norias" (water wheels propelled by animal power or petrol engines). Such other irrigation as exists is free flow. The only important area in Greece which is artificially irrigated belongs to an English concern known as the Copais Land Company in the Boeotian plain.

### C'. Use of Fertilizer in Agricultural Production

There are not enough statistics available to warrant discussion of this topic. See Section A' for production, imports, and exports of commercial fertilizer.

### D'. Prices of Farm Products

Part I lists as sources Bulletin Statistique des Prix Moyens des Principaux Articles Alimentaires; Bulletin Mensuel de Statistique, and Annuaire Statistique de la Grèce.

There are no statistics dealing exclusively with the prices of farm products in Greece. The only data on prices are the quarterly reports of prices of the most important articles of consumption. These reports have been published in quarterly bulletins since 1912 by the Director of Statistics in the Ministry of National Economy.

These price bulletins give, by months and years, the average prices of various products at a number of the principal centers of production and consumption. They thus give a picture of the variations in prices between different places and periods of time. Until 1914 prices were reported for about 51 articles of consumption. The prices of potatoes, legumes, forage plants and certain other articles of first necessity were not included. From the literature available it is not apparent whether these products were included in the publications immediately after 1914 or were added later, but their prices are recorded regularly in the bulletins since 1924. The prices recorded for the year 1912 are all average prices, and are concerned mostly with food products. A distinction is made between retail and wholesale prices in the classification of the articles of consumption, although most of the recorded items are given as retail prices.

The only articles for which both wholesale and retail prices are shown are flour, meat, and olive oil. In the case of flour two classifications are made: (1) wheat flour and (2) flour made from a mixture of cereals (smigos). In the case of meat, wholesale and retail prices are given for beef, veal, mutton, pork, and goat's meat. Explanations of the wholesale, retail, and average prices are given below. The unit of measure in 1912 for almost all products was the oke (1.280 kilograms). In the case of poultry, however, the prices are recorded per piece, and in the case of eggs, the prices shown are per pair.

All articles of consumption for which prices were recorded in 1912 were grouped into various categories which, for comparison, are shown with the categories used for the year 1924.

<u>1912</u>	<u>1924</u>
I. Cereals (Price per oke). Wheat, barley, corn, rye.	I. Flours and pastes (Price per kilogram). Flours of four qualities and macaroni.
II. Dry legumes (Price per oke). Beans, peas.	II. Wheat bread (Price per kilogram). Three qualities.
III. Flour (Price per oke). Wheat and mixed flours.	III. Dry legumes (Price per kilogram) and (green) legumes, beans, peas, potatoes, onions, etc.
IV. Bread (Price per oke). From wheat, from mixed cereals.	IV. Meat (Price per kilogram). Beef, veal, mutton, lamb, pork, goat.
V. Meat (Price per oke). Beef, veal, pork, mutton goat.	V. Poultry (Price per piece).
VI. Poultry (Price per piece). Hens, pullets, geese, turkeys, ducks.	VI. Fish (Price per piece). Two qualities and codfish.
VII. Fish (Price per oke). Superior and inferior qualities.	VII. Dairy products (Price per oke). Milk, butter from cow or goat, cheese.
VIII. Butter and olive oil. (Price per oke).	VIII. Grease and olive oil (Price per kilo).
IX. Wine (Price per oke).	IX. Drinks (Price per kilo). Cognac, wines, and beer.
X. Other food products (Price per oke). Milk, eggs, cheese, coffee, sugar, rice, olives.	X. Colonial products (Price per kilo). Coffee, sugar, rice.
XI. Combustibles (Price per oke). Firewood, charcoal.	XI. Combustibles (Price per kilo). Charcoal, firewood, gas, and alcohol for lighting.
	XII. Forage plants (Price per kilo). Barley, hay, bran.

Continued



XIII: Other articles (Price per kilo).  
Eggs, olives, vinegar, soap,  
salt.

From the above classification we see that many changes have been made during the period 1912-1924. The kilogram was substituted in the 1924 schedule for the oké, which was the general unit of measure in 1912 to 1924. The prices are shown in drachmas and lepta, the monetary units in Greece. Other changes are shown in the above table.

Another improvement in the collection and dissemination of price data which has been put into effect since 1923 is the preparation of two new types of bulletins. One of these deals with wholesale and the other with retail prices, but both of them differ from the price bulletin which has been in use since 1912. The last bulletin available gives the index numbers of retail prices of 61 articles of consumption from 1914 on, the average monthly prices of the same commodities in 106 towns, and the general index numbers of cost of living for the whole country since 1918. The new wholesale price bulletin records the prices of 213 of the most important products in the wholesale market, while the new retail bulletins give the prices of 62 articles, of which 52 were included in the old bulletin and ten added beginning with the year 1924. Only the bulletin recording retail prices has been published, the bulletin for wholesale prices having been postponed on account of lack of complete information on wholesale prices. Judging by the statements given in the price bulletin for the period 1912-1924, very little change has been made in the methods of collecting the data on prices.

The Bureau of Statistics is interested in obtaining information on prices bearing directly on the producer and consumer as well as upon the internal commerce of Greece. For this reason, the study of prices has been so conducted as to include not only the commercial centers of the country but many other sections which from the standpoint of commerce are relatively significant.

Until 1914 the bulletin included prices for the above mentioned articles of consumption in 65 towns and cities of the Old Kingdom. From 1914 to the year 1923 the price inquiry was extended to about 101 cities and large towns, and in 1924 it reached 106 cities. These cities or towns, being mostly the capitals of provinces or departments, represent nearly all types from purely agricultural regions to thickly populated urban centers. The prices are reported as averages for cities and for the country as a whole. No distinction is made between farm prices and delivery prices. The price stated in the bulletin represents the average price of the product during the month, obtained by combining the weekly prices sent in by the price-reporting service, private or governmental. The method, however, is not uniform for all parts of the country. It is likely that some of the reported data represent estimates of average monthly prices. The price-reporting service consists usually of the Chambers of Commerce in the towns or cities where these or similar commercial organizations



exist; while in smaller towns the prices are reported to the Central Statistical Office by municipal authorities or by reliable persons in the commune. The Statistical Office states that, in securing the average prices of articles of consumption, the prices at large stores which on account of their expensive equipment charge higher prices are not taken into account; neither are the prices from stores that sell at unusually low prices. In other words, these prices are meant to be those involving a usual amount of service on the part of retailers.

The data on prices are tabulated in the Bureau of Statistics of the Ministry of National Economy. The Statistical Office calculates the average price for each city and town and the general average price resulting from the various prices. These averages for the country as a whole are weighted according to the population of the market cities or towns in which they are gathered. The Statistical Office explains the methods used in the Bulletin Statistique des Prix Moyens des Principaux Articles Alimentaires, 1924. The same publication gives the index numbers of the cost of living for the years 1914 to 1923. The base year is 1914.

The changes in cost of living are measured by an index number which in general is expressed by the formula:

$$N_t = 100 \frac{dt}{do}$$

and which, for a given unit of time (t), is expressed as the relationship  $\frac{dt}{do}$  that is, the expense (dt) necessary for that period of time (t) to maintain an individual as related to the expenses (do) necessary for an equal period of time at the base period.\* The report gives a detailed discussion of the construction of index numbers and many formulas dealing with the various expenses necessary for the maintenance of a family. These expenses are divided into four parts:

1. Food expenses.
2. Housing " (rent)
3. Clothing "
4. Expenses for cleanliness (e.g., soap), and for fuel and lighting.

#### E'. Value of Agricultural Production

Sources listed in Part I are Statistique Annuelle Agricole and Recensement Agricole, 1911. The Recensement Agricole, 1929, which also contains important information, is not yet generally available.

Other sources are as follows:

Our Tobacco (in Greek) by A. Mantzaris, Secretary General of the Association of Greek Tobacco Manufacturers. Athens, 1929.

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\*Quoted from Bulletin Statistique des Prix Moyens des Principaux Articles Alimentaires.



Monthly Bulletin of the Salonica Tobacco Institute  
(in Greek). Published at Salonica.

The only official sources of information on values of agricultural products in Greece are to be found in the annual agricultural statistics and agricultural censuses. The Bureau of Statistics does not make any special study of the values of farm products. The statistical information given in these two publications is not very complete.

Thus the Statistique Annuelle Agricole de la Grèce of 1928, as well as the previous issues of the same publication, gives only the total estimated value of the year's crop for each product as based on the average price of the product in the place of its production during that year. Table XX following gives figures for 1918, 1920, 1927, and 1928. The average price for each product is given per metric quintal for all crops including cereals, forage crops, grapes, dry legumes, and industrial products.

The values of the companion crops are separated from the values of other crops:

The same arrangement applies to the values of fruit crops. In the case of citrons, lemons, oranges, and tangerines, the average price is given in the table per thousand pieces, and in a separate column are given the total values based upon the above average price. The average price of apples, pears, figs, almonds, walnuts, and other small fruits is given per metric quintal, and similarly their total value is recorded in separate columns of the same table. See Table XVIII, Section N.

The agricultural census of 1911 made no attempt to give in detail the values of farm products. Only the total values of farm products were recorded, average farm prices being used in the calculations. The agricultural census of 1929 follows the same method, but with the improvement the schedules do not ask for the value of livestock but instead for the production of animal products and their value. The schedules call for the total values of each of the following animal products:

1. Dairy products.
  1. Milk from cows.
  2. Milk from other animals.
  3. Butter.
  4. Cheese.
2. Wool.
3. Eggs.
4. Honey.

Statistical data as to the values of raisins and currants and also of tobacco, which are the most important of the agricultural exports of Greece, may be found in publications issued by the Autonomous Currant Institute and Tobacco Institute respectively.

Table XX. VALUE OF AGRICULTURAL PRODUCTS FOR THE YEARS  
1918, 1920, 1927, and 1928

Crops	Total value in drachmas			
	(1) 1918	(1) 1920	(2) 1927	(3) 1928
Cereals	662,826,767	669,499,975	3,476,432,538	3,535,070,100
Dry legumes	54,005,974	41,920,757	137,703,703	147,340,228
Products from gardens	84,847,900	62,697,526	227,279,089	261,670,719
Industrial and aromatic products	178,539,136	225,861,716	2,490,653,788	2,314,411,495
Forage plants	25,003,152	37,830,640	213,377,439	212,161,365
Vines	164,543,327	162,089,913	836,609,847	1,007,524,028
Currants	80,505,355	229,450,592	1,217,233,009	1,376,745,755
Olive oil	255,633,383	527,055,463	1,559,332,261	1,981,491,000
Olives	14,025,687	43,208,314	123,647,471	431,742,000
<b>Grand Total:</b>	<b>1,519,930,681</b>	<b>1,999,614,896</b>	<b>10,282,324,145</b>	<b>1,268,156,690</b>

- (1) Statistique Annuelle du Rendement Agricole, 1918, 1920, Grèce.  
(2) Statistique Annuelle Agricole de la Grèce, 1927, 1928.  
(5) Annuaire Statistique de la Grèce, 1950.



The agricultural census of 1911 makes a clear distinction between the price at which the producer sells and the price at which the consumer in the towns buys. To illustrate the difference, a table is given showing the average prices at which wheat, etc., was sold in 10 of the principal towns in Thessaly (e.g., producer's selling price, Larissa district, 26 drachmae per 100 kilos, merchant's selling price to consumers in Larissa town, 34.42 dr.).

#### F'. Agricultural Income

The data necessary for a discussion of this topic are not available. Only a rough estimate could be developed from the existing information outlined above.

#### G'. Land Values

The sources listed in Part I are Recensement Agricole de la Grèce, 1911 and Annuaire Statistique Agricole.

Statistics in regard to land values in Greece have not been officially compiled, nor does direct information on the subject appear to have been published in any official publication. Since there has never been a cadastral survey of the country, there are no cadastral registers from which information may be derived concerning land values, whether of agricultural or other sorts of land. Any one desiring to make a study of the subject would, therefore, have to get his information either from the mortgage banks or from the Office of the Registrar of Sales, Transfers, and Mortgages. Some of the financial journals, as for instance, the "Oikonomologos" of Athens, publish periodical reports of land sales in various parts of the country.

In recent years land valuations have been carried out on a vast scale by the Greco-Bulgarian Emigration Commission, the Greco-Turkish Exchange Commission, the Refugees Settlement Commission and the Agrarian Expropriation Commissions. Although none of this information has been published, it has been accessible to the writer. Of the above valuations the first three are based on market values. Those of the Greco-Bulgarian and Greco-Turkish Commissions, owing to the nature of these Commissions, err on the side of being rather high. The valuations of the Refugees Settlement Commission are probably the most reliable, and have the advantage of having been applied to an area of some 700,000 hectares scattered all over the country.

Figures supplied to the writer by the Colonization Service, (successor of the Refugees Settlement Commission, now dissolved), showing the minimum and maximum rates for agricultural land in 1929-30 in the districts where refugees were settled are given in Table XXI following.

Table XXI. AVERAGE MARKET VALUE OF AGRICULTURAL LAND  
(per Stremma\*) ON BASIS OF VALUATION BY  
REFUGEES' SETTLEMENT COMMISSION, 1929

375 drc. = £1

District	Maximum drc.	Minimum drc.
<u>I. Continental Greece and Euboea</u>		
Attica-Boeotia	1,068	280
Euboea	1,575	238
<u>II. Thessaly</u>		
Larissa	480	240
Volo	1,190	210
<u>III. Macedonia</u>		
Drama	2,000	69
Salonica	807	218
Langada	600	210
Kilkis	950	286
Verria	2,000	150
Caterini	900	365
Cavalla	1,000	157
Cozani	1,200	307
Yannitsa	1,640	298
Serres	3,600	337
Siderocastro	1,000	308
Florina	8,624	322
Chalcidiki	2,140	290
<u>IV. Thrace</u>		
Evros	1,000	247
Rhodope	1,488	301
<u>V. Epirus</u>		
Jannina	1,350	180
Preveza	712	359
<u>VI. Aegean Islands</u>		
Lemnos	611	611

\* Stremma = 1/4 of an acre



The ordinary factors determining the value of agricultural land in Greece as in other countries are the productivity of the soil, the nature and value of the crop that can be grown, and location (facility of communications, proximity to large towns, etc.). There are also exceptional factors which may give the land in a certain district an artificial value disproportionate to its yield, as for instance, in the district of Florina, where there is a great demand for land on the part of emigrants returning from the United States of America.

Land producing tobacco is in general more valuable than land producing cereals. According to the agricultural census of 1929 (see Table XIV, Section H), the average value of the product per stremma was:

For land bearing cereals.....	Drc.	273
" " " tobacco.....	"	1920
" " " currants.....	"	1922
" " " sultanas.....	"	1600

This difference in the value of the yield is reflected in the price of land; for example, in Larissa, which is predominantly a wheat-producing district, the average price (maximum) is given as drc. 480, whereas in Drama, which is predominantly a tobacco-growing region, the average price (maximum) is given as drc. 2000. (The minimum price of drc. 69 for the same region is a purely nominal figure for land in the mountainous regions near the frontier, for which there is practically no demand).

Land planted with olive trees is not sold by the stremma, but at so much the tree. The price, of course, varies according to the age and productivity of the trees.

H'. Interest Rates on Loans to Agriculture

The source of information on interest rates in Greece is the Agricultural Bank of Greece - Governor's Report on the First Year's Operations and Balance Sheet for 1930. (In Greek).

Until 1928 practically the only agricultural credit institution in Greece was the National Bank of Greece which, through its numerous branches throughout the country, made advances to the cultivators. In 1928 this function was transferred to a State Agricultural Bank.

The interest rates are:

	<u>Short-term</u>	<u>Long-term</u>
To members of cooperative societies	8 1/2 - 9%	7 1/2 - 8%
To others	9 1/2%	8 1/2%

The legal rate of interest in Greece is 12 percent (15 percent with commission expenses, etc.); but private money lenders commonly lend at 25 percent. The operations of the latter have, however, been very much restricted since the institution of the Agricultural Bank.

The rate of discount in Greece today (1931) is 8 to 9 percent.

### I'. Wages of Farm Labor

There is no complete information yet available concerning wages in agriculture. Neither the census of population of 1920 nor the agricultural census of 1911 furnish statistical data on wages for agricultural work.\* The Inspectorate of Labor, at the Ministry of National Economy, published for the years 1927 and 1928 a summary of the reports made by the staff of the Inspection of Labor, dealing mostly with the number of workers in the various industries, hygienic conditions, and working hours. These reports do not give any information on farm labor.

The same office publishes comparative tables of daily and monthly wages of workers in Athens and Piraeus in the *Tableau Comparatif des Salaires Journaliers et Mensuels*. The available information on salaries and wages is for the years 1914 to 1920; it is mainly concerned with industrial occupations. In the last part of the bulletin are quoted the wages paid for agricultural work. It is not made clear whether the wages reported are representative of the prevailing agricultural wages throughout the country, or represent the wage-rate of a particular region. They are daily wages with a working day of twelve hours. The wages are reported for three periods of years, 1914-15, 1917, and 1918-20. The kinds of agricultural work reported in the bulletin are classified as follows:

	1918-20 drachmas
1. Gardeners (vegetable gardens), with food	8 - 10
2. Workers, cultivators of flower gardens, without food	12 - 18
3. Gardeners, florists (workmen), without food	20 - 25
4. Flower sorters (men), working in stores, without food (per month)	240 - 700
5. Cultivators of vines, with food	8 - 10
6. Workers or cultivators in general, with- out food	6 - 10
7. Women vegetable gardeners, with food	5 - 6
8. Women cultivators of vines, with food	2 - 6
9. Flower sorters (women), working in stores, without food (per month)	200 - 450

The 1929 agricultural census instituted a special inquiry concerning agricultural laborers in Greece. The schedule with regard to agricultural labor is as follows:

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\*Such information was collected in the agricultural census of 1929 (see Table 22).



- A. Number of persons that have worked on the farm during 1929.
- (males above 15 years of age
  - ( " below 15 " " "
  - 1. Members of the "cultivator's" family (
  - (females above 15 years of age
  - ( " below 15 " " "
  - (males above 15 years of age
  - ( " below 15 " " "
  - 2. Laborers unrelated to "cultivator's" (
  - family (females above 15 years of age
  - ( " below 15 " " "

B. Number of days these persons worked during 1929.

C. Amount of daily wage during 1929.

- 1. Of males (
- (with board (above 15 years of age
- (below 15 " " "
- (without board (above 15 " " "
- (below 15 " " "
- 2. Of females (
- (with board (above 15 years of age
- (below 15 " " "
- (without board (above 15 " " "
- (below 15 " " "

Although the data collected have not yet been officially published, the writer has been able to obtain from the General Statistical Office a table (see Table XXII) showing the rate of wages ruling in 1929 in each department (prefecture). From this table it appears that the highest wages paid are in the district of Drama (Eastern Macedonia), and the lowest in the district of Corfu (Ionian Islands).

The very considerable variations in rates of wages from district to district are attributable to local causes. Thus wages are higher in the rich tobacco-producing districts of Eastern Macedonia where the cost of living is greater than in other parts of Greece; the same applies to districts where there are large towns or industries, and consequently labor is in more demand. Agricultural wages are lowest in some of the islands, like Corfu and the Cyclades, where there are no important industries competing with agriculture.

J'. Land Tenure

Part I lists as a source Recensement de la Population de la Grèce, 1920.

Other important sources are as follows:

Table XXII. MEAN RATES OF DAILY AGRICULTURAL WAGES\* BY DEPARTMENTS (Agricultural Census, 1929)

Departments	M E N				W O M E N			
	Over 15		Below 15		Over 15		Below 15	
	years		years		years		years	
	of age		of age		of age		of age	
	With	With-	With	With-	With	With-	With	With-
	food	out	food	out	food	out	food	out
	:food	:food	:food	:food	:food	:food	:food	:food
1. Aetolo-Akarnanie	: 46.40	: 63.75	: 24.25	: 33.65	: 32.15	: 44.15	: 21.55	: 30.05
2. Argolis-Corinthia	: 52.90	: 69.75	: 18.05	: 26.60	: 30.90	: 43.25	: 14.80	: 22.80
3. Arcadie	: 39.20	: 56.05	: 18.25	: 26.60	: 27.85	: 40.10	: 15.35	: 22.85
4. Arta	: 41.55	: 55.70	: 16.00	: 21.65	: 25.10	: 33.50	: 16.20	: 20.95
5. Attica-Boeotia	: 52.60	: 76.15	: 24.75	: 35.00	: 32.55	: 45.45	: 20.20	: 28.45
6. Achaia-Elis	: 49.50	: 62.95	: 24.40	: 33.90	: 32.60	: 43.80	: 17.80	: 27.10
7. Drama	: 66.70	: 88.65	: 40.15	: 71.00	: 50.95	: 73.25	: 34.80	: 48.55
8. Evros	: 39.75	: 55.00	: 16.20	: 24.40	: 25.65	: 36.80	: 15.45	: 21.65
9. Euboea	: 45.60	: 59.00	: 18.10	: 25.45	: 25.50	: 34.40	: 17.15	: 22.80
10. Zacynthus	: 49.65	: 68.50	: 24.40	: 32.95	: 30.20	: 45.50	: 16.45	: 23.75
11. Heracleion	: 51.90	: 68.60	: 23.05	: 36.55	: 28.35	: 40.60	: 14.45	: 21.10
12. Salonica	: 56.40	: 74.90	: 27.00	: 37.75	: 37.10	: 51.30	: 23.10	: 34.05
13. Jannina	: 39.20	: 55.10	: 15.75	: 26.85	: 25.40	: 38.95	: 13.35	: 22.50
14. Cavalla	: 62.90	: 85.50	: 31.70	: 44.35	: 51.35	: 67.65	: 25.40	: 36.85
15. Corfu	: 26.45	: 43.60	: 19.80	: 20.00	: 14.30	: 24.70	: 9.05	: 15.35
16. Cephalonie	: 45.75	: 63.40	: 20.80	: 31.80	: 24.05	: 37.00	: 17.50	: 28.40
17. Cozani	: 48.70	: 65.30	: 20.65	: 30.00	: 31.75	: 44.10	: 17.05	: 25.00
18. Cyclades	: 31.45	: 44.40	: 16.35	: 23.70	: 21.75	: 29.40	: 13.75	: 18.95
19. Laconia	: 42.65	: 58.65	: 19.40	: 28.10	: 28.00	: 39.15	: 15.75	: 20.80
20. Larissa	: 56.95	: 77.40	: 24.80	: 36.80	: 34.35	: 48.15	: 24.25	: 35.25
21. Lasitheion	: 42.75	: 56.90	: 16.65	: 23.70	: 22.55	: 32.00	: 12.40	: 18.75
22. Lesbos	: 36.50	: 48.80	: 14.85	: 22.00	: 19.10	: 27.30	: 11.60	: 17.00
23. Messini	: 66.70	: 85.50	: 20.00	: 31.00	: 36.95	: 53.75	: 15.80	: 26.40
24. Pella	: 44.70	: 58.40	: 21.90	: 28.90	: 29.25	: 40.45	: 18.95	: 25.05
25. Preveza	: 37.55	: 54.10	: 18.70	: 27.15	: 20.60	: 30.95	: 13.90	: 21.45
26. Rethymni	: 37.45	: 51.35	: 15.05	: 21.35	: 20.90	: 30.30	: 10.75	: 16.25
27. Rhodope	: 52.30	: 69.35	: 23.80	: 35.30	: 35.65	: 49.10	: 19.85	: 28.90
28. Samos	: 46.00	: 56.55	: 15.95	: 23.85	: 25.25	: 34.90	: 14.20	: 20.45
29. Serres	: 64.05	: 80.90	: 28.75	: 40.00	: 48.50	: 64.35	: 23.95	: 34.75
30. Trikkala	: 52.40	: 68.20	: 20.55	: 31.00	: 37.75	: 50.85	: 16.70	: 25.35
31. Fnthiotis-Phokis	: 47.00	: 62.90	: 20.45	: 29.90	: 30.70	: 42.90	: 17.05	: 25.40
32. Florina	: 48.85	: 63.05	: 18.80	: 29.15	: 31.35	: 45.50	: 16.85	: 26.05
33. Chalcidiki	: 48.55	: 67.70	: 16.45	: 27.90	: 26.40	: 39.35	: 14.30	: 21.65
34. Canea	: 46.70	: 59.05	: 20.35	: 27.30	: 25.90	: 35.35	: 14.95	: 21.25
35. Chios	: 33.90	: 47.15	: 12.40	: 19.50	: 19.10	: 26.10	: 11.80	: 16.80

\* In drachmas.



Recensement des Entreprises Industrielles, 1920.  
Statistique Générale de la Grèce. Ministère de l'Économie  
Nationale, Athènes.

Official Journal, No. 355, Sept., 1929. Schedule  
of the agricultural census of 1929.

A short historical account of the systems of land tenure in Greece is essential to an understanding of Greek statistics of land tenure as well as of conditions in Greece today.

After the Turkish Conquest (14th and 15th centuries) all the good land in the plains was taken away from the native landowners and given to the Moslem (Turkish and Albanian) gentry. The Greek estate owners disappeared with the exception of the monasteries, which were allowed by the Turks to retain their estates. The Greek and Bulgar peasantry in the plains were landless. It was only up in the mountain districts, where the Turks were fewer in number, that the Christian population was allowed to remain in possession of land.

The large and medium-sized farms were known as "chifliks," a Turkish word which has passed into the Greek language, meaning a large estate as opposed to a peasant holding. The "chiflik" was cultivated by Greek or Bulgar tenants called "yaridjis" (from Turkish yari = a half) on the métayer system that is, the tenants took half or a third of the crop, as the case might be. The métayers lived on the estate in mud hovels clustered round the "conak" or manor house of the Turkish squire. If, as was often the case, the Turk happened to be a government official or officer in the army, the estate was managed by a bailiff (usually an Albanian Moslem).

Those peasants who lived up in the mountains and owned their land were much more independent and on a higher level of civilization than the "yaridjis," or métayers, in the plains. They lived in villages which were called "kefalochoria" (or free villages) to distinguish them from the "chifliks." Their houses were often two-storied and built of stone, and their standard of living was generally higher. These mountain villages, however, were not purely agricultural, as the land was often insufficient or too barren to enable the population to subsist by agriculture alone. It was this condition of things in the Christian villages which led to that curious form of emigration - very common throughout the Balkans - by which the male members of the family emigrated to the cities in search of employment, leaving their women folk behind to look after the house and cultivate the fields. There were many villages in Macedonia, Thessaly and Epirus the inhabitants of which had for generations been accustomed to emigrate to Constantinople and other cities of the Ottoman Empire, where they worked mostly as builders, stone masons, carpenters, and bakers, and in other skilled trades.



After the emancipation of Southern Greece in 1830 conditions changed. The whole of the Turkish population was either exterminated or expelled, and the estates previously owned by them were distributed among the Greek population. In the Peloponnese most of the land was cut up into small holdings and divided among the peasantry. The chiflik, or large estate, practically disappeared. In Central Greece, on the other hand, and notably in Attica, Boeotia, and Euboea, where the peasants were less advanced in civilization than in the Peloponnese, certain powerful Greek chieftains who had taken a leading part in the war against the Turks succeeded in substituting themselves for the Turkish landlords. In these regions the large estates were maintained, and the peasantry remained as before tenants or agricultural laborers. The monasteries likewise, which owned great tracts of land and forest, particularly in Attica, were not disturbed. It was not until the second decade of the 20th century, when the laws expropriating large estates were passed, that the monastic estates were broken up and distributed among the tenantry and other small cultivators.

In 1881 Greece annexed the provinces of Thessaly and Arta. The greater part of these provinces consisted of plain, and consequently the land was almost entirely composed of chifliks owned by Turkish and Albanian landlords. Under the treaty of cession the latter retained possession of their estates. Many of these Turkish landlords emigrated subsequently to Constantinople, and either sold or leased their estates to Greeks. Thus was created a class of Greek estate owners who went on exploiting the land on the same system of "métayage" which had existed under the Turks. Barring a few exceptions the land was poorly cultivated. On the one hand, the tenants (métayers), not owning the land, were not interested in developing the estate; on the other, very few of the landlords went in for up-to-date methods of cultivation, many of them being absentees. The relations between landlords and tenants gradually became worse and worse, and as the tenants became politically conscious, a cry arose for expropriation of the large estates. In 1911 the principle of expropriation was accepted by a constitutional amendment, and in 1917 the general expropriation of all the large estates in Thessaly, whether in the property of individuals or monasteries, was decreed.

This measure was also applied to the new provinces acquired in 1913 (Macedonia, Epirus, Crete, etc.), where there were numerous chifliks belonging for the most part to Turks.

In 1922 the influx of refugees forced the government to speed up the process of expropriation, as it was now necessary not only to satisfy the original native tenants but also to find land for the refugees and immigrants of all sorts from Turkey, Bulgaria, and Russia, among whom were some 150,000 agricultural families.

Today the chiflik is practically a thing of the past. In its place there are small peasant holdings varying from 6 to 20 acres. The only large estates surviving today in Greece are plantations (mostly olive and vineyards) which under the Greek constitution are exempt from expropriation,



and one or two model estates run on modern lines which have been spared. The plantations in question are situated for the most part in the Ionian Islands, Crete, and Lesbos, and the model estates in Macedonia.

Besides the system of "métayage" referred to above, which was the prevalent form of land tenure on the large estates devoted to cereal growing, mention must also be made of the system of "emphyteusis" (literally "planting"), a form of tenure dating from Roman times which is prevalent in Attica and certain other parts of Greece. Under this system a peasant enters into an arrangement with a landowner to plant a certain tract of land with vines, these becoming the property of the planter on condition of his paying a ground rent either in money or in kind to the landlord. Peasants cultivating land under this form of tenure are known as "emphyteutai."

Tenants or refugees in whose favor land has been expropriated by the state are debarred from selling for a period of 10 years.

In Old Greece there has never been a land survey, and title is proved by deed (sale, inheritance, dowry, etc.,) or any other sort of evidence. In the northern provinces (Macedonia, Epirus, Thrace), which were the last to be annexed from Turkey, landowners were in possession of proper title deeds issued by the Turkish Cadastral offices, which had been created in Turkey in the sixties of the last century. These title deeds (called "tarou") have been recognized by the Greek government, but the system has not been continued and the cadastral offices have been suppressed. The Refugee Settlement Commission, which was responsible for the settling of refugee cultivators on the land during the period 1924-1930, carried out a special survey of all the lands used for this purpose (about 7,000,000 stremmas) and issued a title deed to every refugee family settled. The expropriation commissions also issued title deeds to the "métayers" and other classes of native cultivators who have received holdings in the expropriated estates.

The only official data on land tenure in Greece were collected in the 1920 census of population. In this census each person engaged in an agricultural occupation was asked to state whether he worked on his own farm or that of his family, managed a farm for someone else, operated a farm as a tenant, planter (emphyteutis), or métayer, or worked as an agricultural laborer.

The answers to this question were unfortunately very incomplete. Nearly one half of the persons giving agriculture as their occupation did not answer the above questions. The replies received, however, have been summarized in the 1920 census of population for the country as a whole according to the following classification of persons engaged in agricultural occupations. No summaries of these data are given in the 1920 census report for separate regions.

Tenure class	: Land exploite- : tion including : forestry	: Animal hus- : bandry and : hunting	: Fishing
	: Number	: Number	: Number
1. Landowners	Males : 319,821	: 11,516	: 549
	Females : 45,377	: 1,064	: 12
	Total : 365,198	: 12,580	: 561
2. Employees*	Males : 3,934	: 384	: 21
	Females : 327	: 25	: 1
	Total : 4,261	: 409	: 22
3. Laborers	Males : 59,012	: 7,772	: 1,237
	Females : 8,173	: 333	: 22
	Total : 67,185	: 8,105	: 1,259
4. Tenants**	Males : 11,553	: -	: -
	Females : 1,275	: -	: -
	Total : 12,828	: -	: -
5. Planters***	Males : 1,060	: -	: -
	Females : 97	: -	: -
	Total : 1,157	: -	: -
6. Mébayers****	Males : 26,923	: 31	: -
	Females : 2,598	: 1	: -
	Total : 29,521	: 32	: -
7. Class not stated	Males : 272,844	: 91,046	: 9,831
	Females : 41,116	: 8,222	: 132
	Total : 313,960	: 99,268	: 9,963
Total	Males : 695,147	: 110,749	: 11,643
	Females : 98,963	: 9,645	: 167
Grand total	: 794,110	: 120,394	: 11,810

\*Persons similar to those classified as "managers" in the agricultural census of the United States. They operate farms for some one else for a salary.

\*\*Persons taking land on lease against the payment, as a rule, of a money rent.

Footnote continued



The total number of persons classified as tenants and métayers in the 1920 census is very small, only 42,381 compared with 365,198 classified as land owners; 313,960 persons, however, have not stated the class to which they belong. It is probable that among these there is a larger proportion of laborers and tenants than of landowners, though there is no means of estimating what the proportions are.

In the agricultural census of 1929 each cultivator was asked to state whether or not the farm operated is owned by him or operated by him as a tenant, planter, or métayer. In case part of the farm is owned and part of it is rented, the cultivator was asked to fill in two separate forms. The results of this census have not yet been published, but the schedules used and instructions given to those taking the census have been published in the Official Journal (No. 355, Sept., 1929):

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\*\*\*Cultivators of vines under the system "emphyteusis."  
See page 125.  
\*\*\*\*(In Greek, "collighoi," a word derived from the Latin, collega = partner). For explanation of term, see p.123 and following. Métayers are very much the same as crop share tenants in the United States. This form of tenure is gradually disappearing (see p.124), peasant proprietorship taking its place.

## INDEX

Where no country is specified it is understood that the reference is to Greece.

The word "yield" used as a sub-head under the various commodities denotes "yield per unit."

	Page		Page
Acorns		Animal industry	
area .....	15	<u>See</u> Stock raising	
production .....	3, 7, 8, 14, 15, 93	Animal products .....	94
value .....	3, 7, 14, 15, 93	classification .....	94
yield .....	15	exports .....	105
Administrative divisions .....	20-21, 34	imports .....	104
Aegean Islands .....	20, 34, 66, 82	manufactures .....	63
census taken .....	32	value .....	95
climate .....	24	world census recommendations	95
crop and livestock statistics	13, 14	Anise and aniseed	
land values .....	118	area .....	7, 8, 12, 14, 15, 81
Aeginites, D.: The climate of		production .....	7, 8, 14, 15, 90
Greece .....	21, 25	value and yield .....	7, 8, 14, 15
Aetolia .....	29	Annuaire statistique de la Grèce	
Agrarian Expropriation		<u>See</u> Greece. Hypourgeion	
Commissions .....	117	Ethnikēs Oikonōmias.	
Agricultural Bank of Greece,		Diouthynsis Statistikēs.	
Governor's report .....	119	Annuaire statistique de la	
Agricultural products		Grèce.	
exports .....	104	Annual bulletin of forest products	
imports .....	105	and forest revenues .....	98
manufactures .....	63	Apiarists, number .....	7
<u>See also</u> under names of products		Apiculture .....	31
Agricultural Society .....	110	Apples	
Agriculture		area .....	15
definition .....	26-28	imports and exports .....	3
natural bases of .....	21, 23-26	production ...	3, 7, 8, 14, 15, 93
Agriculture and related enterprises,		trees .....	13
subdivisions of .....	30-31	value .....	3, 7, 14, 15, 93
Air Ministry		yield .....	15
establishment of meteorological		Apricots	
stations .....	25	imports and exports .....	3
Albanians .....	57, 58	trees .....	13
numbers .....	57	Area <u>See</u> under Land	
Almonds		Arjolis .....	29, 58
imports and exports .....	3	wages .....	122
production .....	3, 7, 8, 14, 15, 93	Armenians, number .....	57
trees .....	13	Arta .....	34, 82
value .....	3, 7, 14, 15, 93	crop and livestock statistics	12
yield .....	15	land tenure .....	124
Anatolia .....	58	wages .....	122



	Page		Page
Artichokes		Beer	
area, production, value, and		consumption .....	4
yield .....	12, 13	index numbers .....	4
Asses .....	83, 84	prices .....	11
imports and exports .....	3	Bees and beehives, number...	12, 14, 86
number ....	3, 7, 8, 12, 14, 15, 86	Beeswax	
Athens .....	23	production and value .....	14
imports and exports .....	10	Beets	
observatory		area, production, value, and	
publications on meteorology	25	yield .....	12, 13
prices .....	4	Belgium .....	109
weather statistics .....	2	Births, registration .....	64
Attica .....	58	Boeotia .....	28
land tenure .....	124, 125	land tenure .....	124
land value .....	118	land values .....	118
rainfall .....	24	wages .....	122
wages .....	122	Bran	
Attica-Boeotia		imports and exports .....	3
land value .....	118	index numbers .....	4
wages .....	122	prices .....	11
Autonomous Currant Institute .....	115	Brandy	
Axios (Vardar) .....	24	index numbers .....	4
Bailiff .....	123	prices .....	11
Baltza .....	21	Bread	
Barley		index numbers .....	4, 9
area .....	3, 7, 8, 12, 13, 14, 15, 75, 81	prices .....	4, 9, 11
imports and exports .....	3	Broomcorn	
index numbers .....	4	area, production, value, and	
prices .....	11	yield .....	13
production ....	3, 7, 8, 12, 13, 14, 15, 90	Budgets, family .....	99-101
quantity of seed used for ...	7	Buffaloes .....	83, 84
value ....	3, 7, 8, 12, 13, 14, 15	imports and exports .....	3
yield ....	3, 7, 8, 12, 13, 14, 15	number ....	3, 7, 8, 12, 14, 15, 86
Barometric pressure .....	9	Bulbs and roots, area, production, and value .....	71
Beans		Bulgars .....	57, 58
area .....	7, 8, 12, 13, 14, 15, 71, 75, 81	Bulletin mensuel de statistique	
imports and exports .....	3	See Greece. Hypourgeion Ethnikēs Oikonomias. Genikē Statistikē Hypēresia. Bulletin mensuel de statistique	
index numbers .....	4, 9	Bulletin mensuel du commerce spécial de la Grèce See Greece. Hypourgeion ethnikēs oikonomias. Dieuthynsis statistikēs. Bulletin mensuel du commerce spécial de la Grèce avec les pays étrangers	
prices .....	4, 9, 11		
production .....	7, 8, 12, 13, 14, 15, 71, 90		
value ....	7, 8, 12, 13, 14, 15, 71		
yield .....	7, 8, 12, 13, 14, 15		
Beef			
index numbers .....	4, 9		
prices .....	4, 9, 11		



	Page		Page
Bulletin statistique des prix moyens des principaux articles alimentaires <u>See</u> Greece. Hypourgeion tōn Oikonomikōn. Statistikon Grapheion. Bulletin statistique des prix moyens des principaux articles aliment aires		Central Macedonia, climate .....	24
Bulls, number .....	12	Cephalonia .....	28
Bulls and oxen		imports and exports .....	10
imports and exports .....	3	wages .....	122
Bureau of Statistics. <u>See</u> Ministry of National Economy. Bureau of Sta- tistics.		Cereals <u>See</u> Grain	
Butter		Chalcidiki .....	
index numbers .....	4, 9	land values .....	118
prices .....	4, 9, 11	wages .....	122
Calamata, imports and exports .....	10	Chalcis, imports and exports .....	10
Calves .....	95	Chambers of Agriculture .....	3, 9
slaughtered .....	8	Chambers of Commerce .....	113
Calves and heifers		Volo, estimate of crop area ...	74, 75
imports and exports .....	3	Cheese	
Camels .....	83	index numbers .....	4
number .....	12, 14	prices .....	4, 9, 11
Carob beans		Cherry trees, number .....	13
area .....	15	Chestnuts	
imports and exports .....	3	area .....	15
production .....	3, 7, 8, 14, 15, 93	production .....	3, 7, 8, 14, 15, 93
trees .....	13	trees .....	13
value .....	3, 7, 14, 15, 93	value .....	3, 7, 14, 15, 93
yield .....	15	yield .....	15
Carobs <u>See</u> Carob beans		Chickens	
Cattle		number .....	14
number .....	12	prices .....	11
scarcity of .....	84	<u>See also</u> Fowls	
slaughtered .....	8	Chiflik .....	124
<u>See also</u> Bulls; Calves; Cows; etc.		definition .....	27, 123
Caucasus .....	58	Chomatianos, Georges .....	2
Cavalla .....	21, 28	Christians, number .....	59
land value .....	118	Citrons	
prices .....	4	imports and exports .....	3
wages .....	122	production .....	3, 7, 8, 14, 15
Cefallonia <u>See</u> Cephalonia		trees .....	13
Census		value .....	3, 7, 14, 15
agricultural ...	19, 26-28, 65-72, 110	yield .....	15
world .....	67, 68	Climate .....	24-25
industrial .....	19, 110	Cloudiness .....	9
population <u>See</u> under Population		Clover	
Central Greece .....	29, 34, 82	area .....	7, 8, 12, 14, 15, 81
crop and livestock statistics ....	12	production .....	7, 8, 12, 14, 15, 90
population census .....	6	value and yield ....	7, 8, 12, 14, 15
		Cocoons	
		imports and exports .....	3
		prices .....	11
		production .....	3
		Coffee	
		index numbers .....	4, 9
		prices .....	4, 9, 11
		Collighoi, definition .....	126



	Page		Page
Colonization Service .....	117	Crops (Continued)	
Commerce		multiple .....	74, 76, 88
general and special .....	101, 102	ratio to livestock .....	92
publications .....	20	unit of measure .....	87
transit .....	102	yield and production .....	87-92
Communes .....	34	Cubic meter, measure in forestry....	97
basic unit for crop reporting ....	88	Cucurbitaceous plants	
Communication with sea,		area .....	12, 14
provinces having .....	23	production, value, and yield ....	14
Comotini .....	28	Cultivators .....	72
Company for Chemical Products and		basic unit in census .....	65
Manures .....	107, 108	definition .....	27, 28
Conak, definition .....	123	number per sq. kilometer .....	48
Convention of Lausanne .....	53, 57	percentage of immigrants .....	58
Convention of Neuilly .....	53, 57	women classed as .....	36
Cooperatives, agricultural		Currants	
number.....	8, 110	area .....	7, 8, 13, 14, 15, 71, 81
Copais Land Company .....	111	exports .....	3, 28
Corfu .....	28	production 7, 8, 12, 14, 15, 71, 90	
imports and exports .....	10	regions where grown .....	28
rainfall .....	24	value .....	7, 8, 12, 14, 15
wages .....	122	yield ....	7, 8, 12, 14, 15, 71, 116
Cost of living		Cyclades Islands .....	34, 82
formula .....	114	crop and livestock statistics....	12
index numbers .....	4, 9, 11	population census .....	6
Cotton		wages .....	122
area .....	7, 8, 12, 14, 15, 81	Cyprus .....	109
prices .....	11		
production .....	7, 8, 12, 14, 15, 90	Dairy products .....	94
value .....	7, 8, 12, 14, 15	<u>See also</u> under names of products	
yield .....	7, 8, 12, 14, 15	Dates, imports and exports .....	3
<u>See also</u> Tobacco and cotton		Deaths .	
Coury, definition .....	29	causes .....	19
Cows		classification by age and sex	64
imports and exports.....	3	rate .....	64
number.....	3, 7, 8, 12, 14, 15, 86	registration .....	64
Crete .....	1, 16, 20, 28, 34, 57, 66	Département, definition .....	21
census taken .....	32	Departments, number .....	34
climate .....	24	Dew .....	9
crop and livestock statistics	13, 14	Divorces, data, collection of .....	64
expropriation .....	124	Dogs, imports and exports .....	3
imports and exports .....	1, 16	Domestic Birds	
Crops		<u>See</u> Poultry	
area .....	72-82	Donkeys, used for transport .....	110
classification .....	76	Dorijas, M. ....	24
companion .....	74, 76	The foreign trade of Greece	21, 25
damage from wandering flocks ...	27, 29	Drama .....	21, 28
data, collection of .....	88	land values.....	118, 119
guarded by watchmen .....	29	wages .....	122
intermittent .....	74	Drought .....	24, 25



	Page		Page
Ducks		Farms (Continued)	
index numbers	4	group division of	28
number	12, 14	number	28-31
prices	11	sizes	30
Earthquakes	9	types	30-31
Eastern Thrace	57	Fat	
Efimeris tis Kyverneseos	99	index numbers	4
Eggplant		prices	11
index numbers	4	Fertilizers, commercial	107-109
prices	11	imports and exports	3
Eggs	95	use in agricultural production	111
index numbers	4, 9	Fields	74
prices	4, 9, 11	Fig plantations	67, 69, 73, 74
Egypt	109	Figs, dried	
Eleutheroudekis: Hellas (Encyclopedia)		imports and exports	3
Emphyteusis	125	production	3, 7, 8, 14, 15, 93
Employees		trees	12, 13
definition and number	126	value	3, 7, 14, 15, 93
Eparchia	20, 21	yield	15
Epirus	20, 30, 34, 57, 66, 82, 123	Figs, mulberries, and chestnuts	
census taken	32	area, production, and value	71
climate	24	Fishing	98-99
crop and livestock statistics	13, 14	census	27
imports and exports	1, 16	products	
land		exports	105
expropriation	124	imports	104
values	118	manufactures	63
Estates, areas of woodland included		Flax	
in farms	97	area	12, 14
EuBoea	34	production, value, and yield	14
crop and livestock statistics	12	Florina	
land		land values	118, 119
tenure	124	wages	122
values	118	Flour	
population census	6	imports and exports	3
wages	122	prices	11
Evaporation	9	Flower garden cultivators, wages	120
Evros (Maritza)	24	Flower sorters, wages	120
land values	118	Foals, imports and exports	3
wages	122	Fodder	
Export <u>See</u> Import and Export		imports and exports	3
Family budgets <u>See</u> Budgets, family		production	8
Farm labor <u>See</u> Labor, farm		<u>See also</u> Forage plants	
Farm operator <u>See</u> Cultivator		Fog	9
Farmers, number	7	Food, production and consumption in	
Farms		relation to population	99
area	29	Forage plants	
definition	30	area	3, 15, 79
		classification	73
		production	3, 15, 90



	Page		Page
Forage plants (Continued)		Geese (Continued)	
value .....	3, 15	number .....	12, 14
yield .....	3, 15, 116	prices .....	11
<u>See also</u> Fodder; Legumes and forage crops		Geographical divisions .....	34
Foreigners, number .....	7	Geographical features, effect on production .....	25
Forests and forest products .....	31, 67, 96-98	Germany .....	109
area .....	4, 7, 24, 66, 68, 70	Goats .....	83, 85, 95
classification .....	68, 97	imports and exports .....	3
fires .....	4, 7	meat, prices .....	11
products		number .....	3, 7, 8, 12, 14, 15, 86
imports and exports .....	4	slaughtered .....	8
production .....	4, 7	<u>See also</u> Sheep and Goats	
value .....	4, 7	Grain	
state receipts from .....	7	area .....	3, 71, 79
study of .....	28	classification .....	73
trees .....	68	cultivators, number .....	7
varieties .....	68	imports and exports .....	3
workers .....	7	production .....	71, 90
<u>See also</u> Woods and forests		regions where grown .....	29
Fowls		value .....	71, 116
index numbers .....	4	<u>See also</u> under names of grains	
number .....	12	Grape fruit trees, number .....	13
prices .....	11	Grapes	
<u>See also</u> Chickens		area .....	7, 8, 14, 15, 81
Frost .....	9	imports and exports .....	3
Fruits		production .....	7, 8, 14, 15, 90
area .....	71	value and yield .....	7, 8, 14, 15
classification .....	91, 92	<u>See also</u> Vines; Vineyards	
imports and exports .....	3	Great Britain .....	109
juices, imports and exports .....	3	Greco-Bulgarian Emigration Com- mission .....	117
trees		Greco-Turkish Exchange Commission... 117	
citrus, area .....	71	Greece. Diouthynsis Emmeson Phoron kai Monopoliön. Statistique du commerce spécial des nouveaux provinces de la Grèce avec les pays étrangers .... 16	
classification .....	8, 9, 91	Greece. Genikē Statistikē Hyperesia. Bulletin semestriel du commerce spécial de la Grèce avec les pays étrangers .....	1, 4
cultivators, number .....	7	Greece. Genikē Statistikē Hypēresia Bulletin trimestriel du commerce spécial de la Grèce avec les pays étrangers .....	1, 4
units of measure .....	91	Greece. Genikē Statistikē Hypēresia. Dénombrément des habitants des nouvelles provinces de la Grèce de 1913 .....	1
value .....	93		
Gainful employment .....	44, 55, 62		
no Greek equivalent for .....	38		
Galaxidi, imports and exports .....	10		
Gardeners, wages .....	120		
Gardens and gardening .....	12, 30, 73		
products, value .....	116		
Garlic			
area, value, and yield .... 12, 13, 14			
production .....	8, 12, 13, 14		
Geese			
index numbers .....	4		



	Page		Page
Greece. Hypēresia Apographēs. Résultats statistiques du recensement général de la population .....	2	Greece. Hypourgeion tōn Oikonomikōn. Statistikon Grapheion. Statistique du commerce extérieur de l'île de Crète .....	16-17
Greece. Hypourgeion Ethnikēs Oikonomias. Diethynsis Statistikēs. Annuaire statistique de la Grèce .....	2-4, 20	Greece. Hypourgeion tōn Oikonomikōn. Statistikon Grapheion. Statistique du commerce spécial de la Grèce avec l'étranger ...	15-16, 20, 110
Greece. Hypourgeion Ethnikēs Oikonomias. Diethynsis Statistikēs. Bulletin mensuel du commerce spécial de la Grèce avec les pays étrangers...	4-5, 20, 94	<u>See also</u> Greece. Hypourgeion tōn Oikonomikōn. Commerce de la Grèce avec les pays étrangers	
Greece. Hypourgeion Ethnikēs Oikonomias. Diethynsis Statistikēs. Population du royaume de Grèce d'après le recensement du 19 décembre 1920 .....	5	Guinea fowls, number .....	12
Greece. Hypourgeion Ethnikēs Oikonomias. Diethynsis Statistikēs. Recensement de la population de la Grèce au 19 décembre 1920-1 janvier 1921 .....	5-6	Hail .....	9
Greece. Hypourgeion Ethnikēs Oikonomias. Genikē Statistikē Hypēresia. Bulletin mensuel de statistique...	6-9, 20, 25, 70, 94	Haliacmon .....	24
Greece. Hypourgeion tōn Esōterikōn. Statistique de la Grèce. Population .....	9-10	Hay	
Greece. Hypourgeion tōn Oikonomikōn. Commerce de la Grèce avec les pays étrangers .....	10	area .....	7, 8, 12, 14, 15, 81
<u>See also</u> Greece. Hypourgeion tōn Oikonomikōn. Statistikon Grapheion. Statistique du commerce spécial de la Grèce avec l'étranger		prices .....	11
Greece. Hypourgeion tōn Oikonomikōn. Tableau du mouvement du commerce...	10	production .....	7, 8, 12, 14, 15, 90
Greece. Hypourgeion tōn Oikonomikōn. Statistikon Grapheion. Bulletin statistique des prix moyens des principaux articles alimentaires .....	11-13, 19, 114	value and yield ....	7, 8, 12, 14, 15
Greece. Hypourgeion tōn Oikonomikōn. Statistikon Grapheion. Recensement agricole de 1911 .....	12-13, 68	Hazelnuts	
Greece. Hypourgeion tōn Oikonomikōn. Statistikon Grapheion. Statistique annuelle du rendement agricole... 1914-1928 .....	13-15, 19, 66, 68, 73, 75, 82, 85, 86, 87, 88, 89, 91, 115	imports and exports .....	3
		index numbers .....	4
		production and value .....	14
		Heifers	
		slaughtered .....	8
		<u>See also</u> Calves and heifers	
		Hellenic Agricultural Society. Agricultural bulletin .....	109
		Hemp	
		area, production, value, and yield .....	12, 14
		Heraclion	
		wages .....	122
		weather statistics .....	2
		Hogs .....	83, 85
		imports and exports .....	3
		number .....	3, 7, 8, 12, 14, 15, 86
		slaughtered .....	8
		Honey .....	95
		production and value .....	14
		Hopkins, C. G. ....	25
		How Greece can produce more food .....	21, 107, 108
		Horses .....	83, 84
		imports and exports .....	3
		number .....	3, 7, 8, 12, 14, 15, 86
		Horticulture .....	31
		Humidity .....	9
		Hydra, imports and exports .....	10



	Page		Page
Hypodioikiseis, definition .....	20, 34	Kalliergitis, definition .....	30
Icthyotropheia, definition .....	98	Karagatch .....	57
Imbros .....	32, 57	Keepers, number .....	7
Imports and Exports .....	1, 4, 5, 9, 10, 16, 17, 101-107	Kefalochoria, definition .....	123
classification of commodi- ties .....	101, 103, 106	Kids, imports and exports .....	3
data, collection of .....	101, 106	Koilon, definition .....	75
duties on .....	106	Koinotis, definition .....	51
method of recording.....	103, 106	Kublbrodt: Klimatologie und Meteoro- logie von Mazedonien .....	25
weight .....	106		
<u>See also</u> Commerce		Labor	
Income		classification .....	61-62, 120
no data available .....	117	farm .....	61-63
Index numbers .....	11, 113	industrial .....	63
construction .....	114	number of workers .....	61-62, 126
<u>See also</u> under cost of living; names of products		ratio of workers to land .....	72
Industrial and aromatic plants		seasonal .....	63
area .....	3, 79	<u>See also</u> Wages	
classification .....	73	Lagoons .....	98
production .....	3, 90	Lamb	
yield .....	3	index numbers .....	4, 9
value .....	3, 116	prices .....	4, 9, 11
<u>See also</u> under names of products		Land	
Institut International d'Agriculture.		arable .....	23, 65, 67
Bureau des Renseignements Agricoles		area ....	2, 3, 6, 8, 52, 65, 69, 70
et des Maladies des Plantes. Produc- tion et consommation des engrais		barren .....	70, 71
chimiques dans le monde .....	107	ceded for settlement .....	3, 9
Insurance		classification ...	65, 66, 69, 70, 73
paid to employees, tobacco		destruction by floods .....	23-24
manufacture .....	9	expropriated ....	3, 8, 30, 124, 125
International Institute of Agricul- ture .....	67, 68, 70, 107, 108	fallow .....	12, 67, 69, 71, 73
Ionian Islands .....	28, 34	in crops .....	26, 67
climate .....	24	owners .....	126-127
crop and livestock statistics ...	12	pasture <u>See</u> Pasture land	
density of population .....	48	productive .....	67, 68
population census .....	6	settlement	
Irrigation .....	111	expenditures .....	3, 9
Italy .....	109	<u>See also</u> Refugees; Refugees	
Jannina		Settlement Commission in Macedonia	
land values .....	118	survey .....	66, 125
prices .....	4	tenure .....	121, 123-127
wages .....	122	unit of measurement .....	66
weather statistics .....	2	unproductive .....	68
Jews, number .....	57, 60	utilization .....	64-72
		values .....	117-119
		factors determining .....	119
		waste .....	68
		Languages spoken .....	58, 59

	Page		Page
Larissa		Loans to agriculture, interest	
land values .....	118, 119	rates .....	119-120
prices .....	4	Lupine	
wages .....	122	area, production, value, and	
Leeks, area .....	12	yield .....	13, 14
Legumes		Macaroni	
area .....	3, 71, 79, 81	index numbers .....	4, 9
classification .....	73	prices .....	4, 9, 11
production .....	3, 71, 90	Macedonia .....	20, 21, 34
regions where grown .....	29	census taken .....	32
value .....	3, 71, 116	climate .....	24
yield .....	3	crop and livestock statistics ...	13
Legumes and forage crops, cultiva-		imports and exports .....	1, 16
tors, number .....	7	land	
Lemnos .....	57	expropriation .....	30, 124
land values .....	118	values .....	118
Lemons		language .....	58
area .....	15	livestock census .....	82
imports and exports .....	3	migration .....	123
production .....	3, 7, 8, 14, 15, 93	population .....	57
trees .....	13	production data sources .....	66
value .....	3, 7, 14, 15, 93	refugees, settlement of <u>See</u>	
yield .....	15	Refugees; Refugees Settlement	
Lentils		Commission in Macedonia	
area .....	7, 8, 12, 13, 14, 15, 81	size of farms .....	30
imports and exports .....	3	tobacco .....	28
production .....	7, 8, 12, 13, 14, 15, 90	Machinery .....	110
value and yield .....	7, 8, 12, 13, 14, 15	imports .....	3
Lesbos .....	20, 28, 57	Maize	
wages .....	122	area .....	3, 7, 8, 12, 13, 14, 15, 75, 81
Livestock		imports and exports .....	3
breeders, number .....	7	prices .....	11
ceded to refugees .....	3, 7	production .....	3, 7, 8, 12, 13, 14, 15, 90
census .....	26, 82-85, 94-95	regions where grown .....	29
classification .....	82-87, 94-95	value and yield .....	3, 7, 8, 12, 13, 14, 15
contagious diseases .....	7, 8	Malaria, causes .....	24
employed in agricultural		Malt .....	
work .....	109-110	imports and exports .....	3
exports .....	105	Mandarins	
imports .....	104	area .....	15
industry, subdivisions of .....	31	imports and exports .....	3
migration to and from plains .....	27	production .....	3, 7, 8, 14, 15
number .....	14	trees .....	13
owners .....	27, 48	value .....	3, 7, 14, 15
ratio to land .....	87	yield .....	15
ratio to population .....	87	<u>See also</u> Tangerines	
ratio to workers .....	87	Mansolas, Alexandre .....	10
slaughtered .....	8, 94	Mantzaris, A. : Our tobacco .....	114
weight .....	85		
See also under names of animals			



	Page		Page
Map .....	22	Ministry of Agriculture (Continued)	
Maravelakis, M. J.: Geophysical investigations in Macedonia ...	21, 25	Service for Agricultural Machinery .....	110
Mares		Veterinary Service .....	94
imports and exports .....	3	Ministry of Finance. Statistical Bureau on Imports and Exports...	101
number .....	3, 7, 8, 14, 15, 86	Ministry of the Interior .....	21
Mariolopoulos, C. G.: Etude sur le climat de la Grèce .....	25	Central Statistical Office.	
Marriages .....	64	See Ministry of National Economy. Bureau of Statistics	
registration .....	64	Ministry of Justice .....	63, 64
Marshes .....	70	Ministry of National Economy	
area .....	12, 71	Bureau of Statistics ....	19, 21, 25, 32, 33, 53, 63, 64, 65, 66, 67, 68, 70, 71, 72, 75, 77, 82, 85, 86, 88, 91, 94, 99, 100, 101, 102, 103, 107, 108, 109, 111, 113, 114
Maslin .....		Industrial census, 1920 .....	109
area .....	3, 7, 8, 13, 14, 15, 81	Monthly bulletins of open-sea and lagoon fishing ....	98
production ...	3, 7, 8, 13, 14, 15, 90	Direction of Labor and Social Insurance. Reports .....	61
quantity of seed used for .....	8	Inspectorate of Labor .....	61, 120
value and yield ...	3, 7, 8, 13, 14, 15	Schedule of the agricultural census of 1929 ....	65, 72, 87, 94
See also Mixed Grain		Tableau comparatif des salaires journaliers et mensuels .....	120
Meadows .....	73	Ministry of War. Cartographical Service .....	23
area .....	69, 71, 12	Mixed Grain See Maslin	
production and value .....	71	Moisture .....	25
Meadows and pastures .....	67, 68	Mulberry trees, number .....	13
Meal, prices .....	11	Mules .....	83, 84
Mears: Greece today .....	107	imports and exports .....	3
Meat		number .....	3, 7, 8, 12, 14, 15, 86
production .....	8	Mussulmans, number .....	60
See also under specific kinds of meat		Must	
Meras, definition .....	29	area .....	7, 8, 14, 15
Métayage and métayers .....	123, 124, 126, 127	production .....	3, 7, 8, 14, 15, 90
Meteorological stations .....	25	value .....	3, 7, 8, 14, 15
Meteorology .....	2	yield .....	7, 8, 14, 15
Metric quintal .....	89, 90, 92	Mutton	
measure in forestry .....	97	index numbers .....	4
Migrations, racial .....	57-58	prices .....	11
Milk		Mytilene .....	28
index numbers .....	4, 9		
prices .....	4, 9, 11	National Bank of Greece .....	119
Millet		Naupli See Nauplia	
area, production, value, and yield .....	13	Nauplia, imports and exports .....	10
Ministry of Agriculture .....	107		
Bureau of Forests. Annual bulletin of forest products and revenues of the forests of Greece .....	96		
Department of Woods and Forests...	68		
The public forests of Greece...	24, 65, 96, 98		
Director of Fisheries .....	99		



	Page		Page
Nestos .....	24	Olives (Continued)	
New Greece .....	21, 34	regions where grown .....	29
Nomads .....	27, 30, 58	trees .....	13
Nomoi, definition .....	20, 21, 34	value .....	3, 7, 8, 12, 14, 15, 71, 116
Northern Greece .....	24, 29, 30	yield .....	7, 8, 12, 14, 15
climate .....	24	Olives and oil substances	
Northern Macedonia, climate .....	24	exports .....	105
Nurserymen, number .....	7	imports .....	104
Nuts <u>See</u> Walnuts		Olive yards .....	67, 69, 73, 74
Oats		Onions	
area .....	3, 7, 8, 12, 13, 14, 15, 71, 81	area, production, value, and yield .....	12, 13, 14
imports and exports .....	3	index numbers .....	4
prices .....	11	prices .....	11
production .....	3, 7, 8, 12, 13, 14, 15, 71, 90	Opium	
quantity of seed used for .....	8	area, production, value, and yield .....	14
value ...	3, 7, 8, 12, 13, 14, 15, 71	Oranges	
yield .....	3, 7, 8, 12, 13, 14, 15	area .....	15
Occupations		imports and exports .....	3
according to sex .....	42-43	production .....	3, 7, 8, 14, 15, 93
auxiliary .....	36, 39-40, 41	trees .....	13
main .....	36, 39-40, 41	value .....	3, 7, 14, 15, 93
technological table .....	36-38	yield .....	15
ten vocational categories ....	35-36	<u>See also</u> Mandarins; Tangerines	
Official Journal of the Greek Govern- ment .....	99, 101	Orchards .....	31, 69, 73
Schedule of the agricultural census of 1929 .....	123	area .....	12
Oikonomologos .....	117	Organization, statistical .....	19-21
Oke, unit of measure .....	89, 95, 97, 98, 99, 106	Oxen .....	83, 84
Old Greece .....	20, 26, 34	number .....	3, 7, 8, 12, 14, 15, 86
crop and livestock statistics ...	14	slaughtered .....	8
imports and exports .....	16	<u>See also</u> Bulls and oxen	
Olive oil		Pallis, A. A.	
exports .....	3, 28	Les effets de la guerre sur la population de la Grèce .....	57
index numbers .....	4, 9	The Greek census of 1928 .....	57
prices .....	4, 9, 11	Racial migrations in the Balkans .....	57
production .....	3, 7, 8, 12, 14, 15, 71, 90	Pasture land .....	69
value .....	3, 7, 8, 12, 14, 15, 71, 116	area .....	12, 71
yield .....	7, 8, 12, 14, 15	village commons used for ...	28, 29
Olives		winter, restriction of area ....	27
area .....	7, 8, 12, 15, 71	Patras .....	23
cultivators .....	7	imports and exports .....	10
index numbers .....	4, 9	prices .....	4
prices .....	4, 9, 11	Peaches	
production .....	3, 7, 8, 12, 14, 15, 71, 90	imports and exports .....	3
		trees .....	13
		Pears	
		area .....	15



	Page		Page
Pears (Continued)		Potatoes (Continued)	
imports and exports .....	3	imports and exports .....	3
production .....	3, 7, 8, 14, 15, 93	index numbers .....	4, 9
trees .....	13	prices .....	4, 9, 11
value .....	3, 7, 14, 15, 93	production .....	7, 8, 12, 13, 14, 15, 90
yield .....	15	value and yield .....	7, 8, 12, 13, 14, 15
Peas		Poultry .....	83, 85, 87
area .....	7, 8, 12, 13, 14, 15, 81	imports .....	105
dried, prices .....	11	number .....	3, 7, 8, 14, 15, 86
imports and exports .....	3	raising not a principal enter- prise .....	31
production .....	7, 8, 12, 13, 14, 15, 90	<u>See also</u> Chickens; Ducks; Geese; etc. ....	
value and yield .....	7, 8, 12, 13, 14, 15	Power on farms .....	109-111
Peloponnese .....	20	supplied by animals .....	109-110
climate .....	24	water .....	110
crop and livestock statistics ..	12	Precipitation .....	25
damage by torrents .....	23-24	Prefectures .....	20
land tenure .....	124	Prices .....	19, 111-114
livestock census .....	82	land .....	118, 119
types of farms .....	28	producer's and consumer's .....	117
Peneius .....	24	Production .....	87-92
Pigeons, number .....	12	combined agricultural .....	95
Pigs <u>See</u> Hogs		ratio to land .....	96
Piraeus		ratio to livestock .....	92
imports and exports .....	10	ratio to workers .....	95
prices .....	4	value .....	114-117
Pistachio nuts		Province, definition .....	21
imports and exports .....	3	Pumpkins	
Plantations .....	124, 125	index numbers .....	4
<u>See also</u> Fig plantations		prices .....	11
Planters, number .....	126	Quince trees, number .....	13
Plums		Rabbits .....	83, 85
imports and exports .....	3	number ....	3, 7, 8, 12, 14, 15, 86
trees .....	13	Rainfall .....	9, 24, 25
Poppy seed		recorders .....	25
area, production, value, and yield .....	14	Raisins, sultana	
Population		area .....	3, 7, 8, 12, 14, 15, 71, 80, 81
alien elements .....	57-58	exports .....	3
by religions and languages ....	59-60	production .....	7, 8, 12, 14, 15, 71, 90
census...1, 2-3, 5, 6, 7, 9, 10, 31-61		quantity used in industry .....	3
method of enumeration .....	32-33	regions where grown .....	28
de facto .....	34-35	value .....	7, 8, 12, 14, 15, 71
de jure .....	35	yield .....	7, 8, 12, 14, 15
density .....	48, 52		
gainfully employed .....	44, 55, 62		
increase .....	35, 57		
ratio to land .....	72		
rural and urban... 46, 48, 49, 50, 51			
Pork, prices .....	11		
Potatoes			
area ... 7, 8, 12, 13, 14, 15, 75, 81			



	Page		Page
Recensement Agricole de 1911 <u>See</u>		Salonica	20, 21
Greece. Hypourgeion tōn Oikon-		land values	118
omikōn. Statistikon Grapheion.		prices	4
Recensement agricole de 1911		wages	122
Recensement des entreprises		weather statistics	2
industrielles	51, 63, 121	Salonica Tobacco Institute. Monthly	
Red pepper		bulletin	115
area, production, value, and		Samos	20
yield	14	wages	122
Refugees		Santorin, imports and exports	10
language	58	Sarrakatsans	27
livestock ceded to	3, 7	number	58
number	7, 58	School district, basic unit for	
settlement	25, 27, 29, 58	crop reporting	88
<u>See also</u> Refugees Settlement		Sericulture	31
Commission in Macedonia		Sericulturists, number	3, 7
Refugees Settlement Commission in		Service of Fertilizers, duties of...	108
Macedonia	25, 29	Sesame	
Greek refugee settlement	58	area	7, 8, 12, 14, 15, 81
land survey	125	production	7, 8, 14, 15, 90
land valuation	117, 118	value and yield	7, 8, 14, 15
Registrar of Sales, Transfers, and		Settlement	46
Mortgages	117	<u>See also</u> Refugees; Refugees Settle-	
Religions	59-60	ment Commission in Macedonia	
Rhodope		Sheep	83, 85
land values	118	breeding nomadic, disappearance	
wages	122	of	27
Rice	73	imports and exports	3
area	12, 14	number	3, 7, 8, 12, 14, 15, 86
imports and exports	3	slaughtered	8
index numbers	4, 9	Sheep and goats, slaughtered	8
prices	4, 9, 11	Sheep and lambs, slaughtered	8
production, value, and yield	12, 14	Silk, raw, imports and exports	3
Rosakia		Silkworm eggs, imports and exports	3
area, production, and value	71	Snow	9
<u>See also</u> Raisins, sultana		Soil	
Royal stremma, unit of measure	66, 72, 75	analysis	108
<u>See also</u> Stremma		erosion, causes	24
Rye		study	25
area	3, 7, 8, 12, 13, 14, 15, 81	Sorghum	
production	3, 7, 8, 12, 13, 14, 15, 90	area, production, value, and	
quantity of seed used for	8	yield	13
value and yield	3, 7, 8, 12, 13, 14, 15	Southern Greece	
Saffron		climate	24
area, production, value, and		damage by torrents	23
yield	14	emancipation	124
Sainte Maure, imports and exports...	10	Spetzia, imports and exports	10
		Sponges	98
		Starch, imports and exports	3
		Statistical Office. <u>See</u> Ministry of	
		National Economy. Bureau of	
		Statistics.	



	Page		Page
Statistique annuelle agricole de la Grèce. <u>See</u> Greece. Hypourgeion tōn Oikonomikōn. Statistikon Grapheion. Statistique annuelle du rendement agricole		Tenedos .....	57
Statistique annuelle du rendement agricole de la Grèce. <u>See</u> Greece. Hypourgeion tōn Oikonomikōn. Statistikon Grapheion. Statistique annuelle du rendement agricole		census taken .....	32
Statistique du commerce de la Grèce. <u>See</u> Greece. Hypourgeion tōn Oikonomikōn. Statistikon Grapheion. Statistique du commerce spécial de la Grèce avec l'étranger		Thessaly .....	20, 23, 34
Statistique du mouvement de la population .....	63, 64	census taken .....	32
Statistique Générale de la Grèce....	66	climate .....	24
Stockraising and stockraisers .....	26, 27, 30	emigration .....	123
Straw		land	
area .....	7, 8, 14	expropriation .....	30, 124
prices .....	11	tenure .....	124
production .....	7, 8, 14	value .....	118
value and yield .....	14	livestock census .....	82
Strenma, unit of measure.....	79, 81, 89, 118, 125	wheat grown in .....	28
<u>See also</u> Royal strenma		Thrace .....	21, 57
Struma .....	24	census taken .....	32
Subprefectures .....	20, 34	damage by floods .....	24
Sugar		land values .....	118
index numbers and prices ....	4, 9, 11	livestock .....	82
Superintendents, number .....	7	tobacco grown .....	29
Swamps .....	70	wheat grown .....	28
area .....	71	Timber, production and consumption in relation to population, no data available .....	99
Swamps and marshes .....	68	Tobacco	
Synoikismos, definition .....	46	area....	7, 8, 12, 14, 15, 71, 75, 81
Syra, imports and exports .....	10	consumption .....	4, 9
Syrakis, D. ....	58	exports .....	3, 28
Nomadic and other forms of stock raising in Greece .....	82	manufacture, statistics .....	9
Tangerines		prices .....	11
production and value .....	93	production .....	3, 7, 8, 12, 14, 15, 71, 90
<u>See also</u> Mandarins		regions where grown .....	28, 29
Tares		value .....	3, 7, 8, 12, 14, 15, 71
area .....	12, 13, 14	yield .....	7, 8, 12, 14, 15
production, value, and yield...	13, 14	Tobacco and cotton, cultivators, number .....	7
Tarou, definition .....	125	Tobacco Institute .....	115
Temperature .....	9	Tomatoes	
Tenants .....	72	area .....	12, 13
number .....	126, 127	prices .....	11
		production, value, and yield ...	13
		Topographical features .....	23-24
		Topographical nomenclature .....	20-21
		Transhumance, definition .....	27
		Transportation of products .....	23
		Tripoli, weather statistics .....	2
		Tselingas, definition .....	58
		Turkey .....	109
		Turkeys	
		index numbers .....	4
		numbers .....	12, 14
		prices .....	11
		Turks .....	57



	Page		Page
Unemployment		Weather conditions, literature on ...	25
tobacco manufacture .....	9	Weight, units in use in Greece .....	89
United States .....	109	Western Thrace .....	28, 34, 57, 66
Units of measurement .....	66	Wheat	
variations with crops .....	89	area .....	3, 7, 8, 12, 13, 14, 15, 75, 81
<u>See also</u> under names of products;		imports and exports .....	3
Prices		prices .....	11
Veal		production .....	3, 7, 8, 12, 13, 14, 15, 90
index numbers .....	4	quantity of seed used for...	7, 89
prices .....	11	regions where grown .....	28, 29
Vegetable gardens and orchards ...	67, 74	value .....	3, 7, 8, 12, 13, 14, 15
Vegetables .....	70	yield .....	3, 7, 8, 12, 13, 14, 15, 89
area .....	3, 71, 79, 81	Wind .....	9, 24
classification .....	73	Wine	
cultivators .....	7	exports .....	3, 28
imports and exports .....	3	index numbers .....	4, 9
production .....	3, 71, 90	prices .....	9, 11
value .....	3, 71	production and value .....	71
yield .....	3	<u>See also</u> Vines	
Vetch		Wine and currant culture .....	31
area, production, value, and		Wood	
yield .....	12, 13, 14	index numbers .....	4, 9
Vines		prices .....	4, 9, 11
area .....	3, 12, 71	Woods and forests	
cultivators, wages .....	120	area .....	12
production .....	12, 71, 90	<u>See also</u> Forests and forest	
regions where grown .....	29	products	
value .....	12, 71, 116	Wool .....	95
yield .....	12	prices .....	11
Vineyards .....	67, 69, 74	Workers	
area .....	79, 80	<u>See</u> under Labor	
classification .....	73	Xanthi .....	28
owners .....	7	Yaridjis, definition .....	123
Vital statistics .....	19, 63-64	Zante	
collection of data .....	63	imports and exports .....	10
registration .....	63	weather statistics .....	2
Vlachs .....	27, 57, 58	Zygion, measure in forestry .....	97
relation to peasants .....	27		
Volo, Chamber of Commerce			
estimate of crop area .....	74, 75		
Wages .....	120-122		
daily rates by departments .....	122		
tobacco manufacture .....	9		
Walnuts			
area .....	15		
imports and exports .....	3		
production .....	3, 7, 8, 14, 15, 93		
trees .....	13		
value .....	3, 7, 14, 15, 93		
yield .....	15		





